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DTIC ACCESSION NUMBER

LEVEL II

INVENTORY

The TPRC Data Series. Volume 6(s) Supplement

DOCUMENT IDENTIFICATION

1976

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SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* Thermophysical Properties of Matter-The TPRC Data Series--Vol. 6S. Specific Heat-Nonmetallic Liquids and Gases (Supplement)		5. TYPE OF REPORT & PERIOD COVERED Data Book (See Block 18) 6. PERFORMING ORG. REPORT NUMBER TPRC Data Series/Vol. 6S
7. AUTHOR(s) Touloukian, Y. S. and Makita, T.		8. CONTRACT OR GRANT NUMBER(s) DSA 900-76-C-0860
9. PERFORMING ORGANIZATION NAME AND ADDRESS CINDAS/Purdue University 2595 Yeager Road West Lafayette, IN 47906		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Logistics Agency DTIC-AI/Cameron Station Alexandria, VA 22314		12. REPORT DATE 1976 13. NUMBER OF PAGES 169
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)* Army Materials & Mechanics Research Center Attn: DRXMR-P/Arsenal Street Watertown, MA 02172		15. SECURITY CLASS. *(of this report)* Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Unlimited

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES TEPIAC Publication (DTIC Source Code 413571) Limited hard copies on Data Book available from publisher; Plenum Publishing Corp.,227 W. 17th St., New York, NY 10011

Price: $29.50/copy. Microfiche copy available from DTIC

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

*Specific Heat--*thermophysical properties--*liquids--*gases--*inorganic compounds--*organic compounds

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

The TPRC Data Series published in 13 volumes plus a Master Index volume constitutes a permanent and valuable contribution to science and technology. This 17,000 page Data Series should form a necessary acquisition to all scientific and technological libraries and laboratories. These volumes contain an enormous amount of data and information for thermophysical properties on more than 5,000 different materials of interest to researchers in government laboratories and the defense industrial establishement.

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DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

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20. ABSTRACT (cont)

Volume 6S. 'Specific Heat - Nonmetallic Liquids and Gases (Supplement),' Touloukian, Y. S. and Makita, T., 169 pp., 1976.

Volume 6(supplement) in this 14 volume TPRC Data Series contains data on the constant-pressure specific heat of nonmetallic elements and compounds which exist in the liquid, gaseous, or vapor state at normal temperature and pressure or at saturated conditions. The tabulated data represent only a segment of the available information; therefore, whenever available, additional references on each substance are to be found in Section II (Supplemental References). In all cases data were extracted only from original papers or reports. Data reported in secondary sources are not included. It should be emphasized that unlike in Volume 6, the reported data have not been evaluated in any form and that the user should refer to the source document and perform his own critque.

The tabular data are arranged in alphabetical order by substance name. The Index to Substances lists the 307 substances by their primary names together with their synonyms, trade names, and their equivalents with appropriate cross-references. This represents a total listing of 840 names.

SPECIFIC HEAT

Nonmetallic Liquids and Gases

(SUPPLEMENT)

THERMOPHYSICAL PROPERTIES OF MATTER

The TPRC Data Series

A Comprehensive Compilation of Data by the
Thermophysical Properties Research Center (TPRC), Purdue University

Y. S. Touloukian, Series Editor
C. Y. Ho, Series Technical Editor

Volume 1. Thermal Conductivity—Metallic Elements and Alloys
Volume 2. Thermal Conductivity—Nonmetallic Solids
Volume 3. Thermal Conductivity—Nonmetallic Liquids and Gases
Volume 4. Specific Heat—Metallic Elements and Alloys
Volume 5. Specific Heat—Nonmetallic Solids
Volume 6. Specific Heat—Nonmetallic Liquids and Gases (and Supplement)
Volume 7. Thermal Radiative Properties—Metallic Elements and Alloys
Volume 8. Thermal Radiative Properties—Nonmetallic Solids
Volume 9. Thermal Radiative Properties—Coatings
Volume 10. Thermal Diffusivity
Volume 11. Viscosity
Volume 12. Thermal Expansion-Metallic Elements and Alloys
Volume 13. Thermal Expansion-Nonmetallic Solids

New data on thermophysical properties are being constantly accumulated at TPRC. Contact TPRC and use its interim updating services for the most current information

THERMOPHYSICAL PROPERTIES OF MATTER

SUPPLEMENT TO VOLUME 6

SPECIFIC HEAT

Nonmetallic Liquids and Gases

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IFI/PLENUM • NEW YORK-WASHINGTON

Library of Congress Cataloging in Publication Data

Touloukian, Yerman Sarkis, 1918-
Specific heat.

(Thermophysical properties of matter; v. 6, suppl).
Bibliography: p.
Includes index.
1. Liquids—Thermal properties—Charts, diagrams, etc. 2. Gases—Thermal properties—Charts, diagrams, etc. 3. Specific heat. I. Makita, Tadashi, 1925- joint author. II. Title.
QC173.397.P87 1970 vol. 6 suppl. [QC145.4.T5]
ISBN 0-306-67091-1 536'.08s [536'.63] 76-48062

IFI/Plenum Data Company is a division of
Plenum Publishing Corporation
227 West 17th Street, New York, N.Y. 10011

Distributed in Europe by Heyden & Son, Ltd.
Spectrum House, Alderton Crescent
London NW4 3XX, England

Printed in the United States of America

"In this work, when it shall be found that much is omitted, let it not be forgotten that much likewise is performed..."

SAMUEL JOHNSON, A.M.

From last paragraph of Preface to his two-volume *Dictionary of the English Language*, Vol. I, page 5, 1755, London, Printed by Strahan.

Foreword

This work constitutes a by-product resulting from a program of systematic data collection and critical evaluation of the constant-pressure specific heat of seventy selected substances of technical importance which has resulted in Volume 6 of this data series.

In formulating the plans for the data extraction from the papers relating to the seventy substances of primary interest covered in Volume 6, it was decided that all data reported in the papers would be extracted and processed separately but not analyzed. As a result of this practice a large quantity of specific heat data was accumulated covering 307 substances. This extensive data collection is hereby presented as a supplement to Volume 6 with the thought that it will prove to be an extremely useful reference source. To the extent that the tabulated data were uncovered only incidentally from documents which were primarily studied from a different point of view, the reported data for each substance are by no means comprehensive or complete. Therefore, supplemental references on C_p are cited for each substance, located by an exhaustive search of the TPRC/CINDAS Bibliographic Data Bank. This added feature makes the coverage of the specific heat literature on the 307 reported substances the most comprehensive compendium/bibliography system available. Naturally, in order to avoid duplication, this supplement does not cite the substances already reported in Volume 6.

It is hoped that this compendium will prove to be an added useful reference tool even though each user will have to make his own assessment concerning the validity of the reported raw data or those to be found in additional references cited.

I wish to take this opportunity to acknowledge the modest program support of CINDAS' Kobe Affiliate over the past twelve years by the Air Force Materials Laboratory, WPAFB, Ohio, the Defense Supply Agency, Cameron Station, Virginia, and more recently by the Office of Standard Reference Data, NBS. Their support of the critical evaluation of the specific heat of fluids, of which this work is a by-product, is greatly appreciated.

Y. S. TOULOUKIAN
Director, CINDAS
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Purdue University
West Lafayette, Indiana
June 1976

Contents

Introduction and Presentation of Data

This volume contains data on the constant-pressure specific heat of nonmetallic elements and compounds which exist in the liquid, gaseous, or vapor state at normal temperature and pressure or at saturated conditions. The tabulated data represent only a segment of the available information; therefore, whenever available, additional references on each substance are to be found in Section II (Supplemental References). In all cases data were extracted only from original papers or reports. Data reported in secondary sources are not included. It should be emphasized that unlike in Volume 6, the reported data have not been evaluated in any form and that the user should refer to the source document and perform his own critique.

ARRANGEMENT OF SUBSTANCES

The tabular data on "Specific Heat of Fluids" (Section I), the "Supplemental References" (Section II), and the "Index to Substances" (Section IV), are arranged in alphabetical order by substance name. The names of substances are those used by TPRC/CINDAS in its Bibliographic Series.* The Index to Substances lists the 307 substances by their primary names together with their synonyms, trade names, and their equivalents with appropriate cross-references. This represents a total listing of 840 names. The alphabetization rules ignore all numeric and alphabetic prefixes.

ABBREVIATIONS, SYMBOLS, NOTATIONS, AND UNITS

Most abbreviations and symbols used are those generally accepted in scientific and engineering practice.

1. *Physical State:* L = liquid, G = gas.
2. *Reference Number:* The references to the data and to supplemental sources cited in Section III (Bibliography) are designated by the TPRC/CINDAS serial number, and correspond to those given in the *Retrieval Guide.** Any reference may be secured from CINDAS by simply citing the TPRC accession number.
3. *Purity* of the samples and estimated *Error* are given in percent and are shown only when they are cited in the original reference.
4. *Method of Determination* of the data is designated by the following abbreviations:

Exper	Experimental method
Theor	Theoretical calculation
Deriv	Derived by empirical method
Corr	Correlated values
Cited	Simply cited values

5. *Units and Conversion Factors:* The physical quantities P, T, and C_p are given in SI units (International System of Units):

P	pressure in bar (10^5 pascal)
T	temperature in K (kelvin)
C_p	specific heat at constant pressure (kilojoule/kilogram·kelvin)

Conversion factors that may be used to convert the various tabulated quantities to other indicated units are given in Table 1.

Table 1. Conversion Factors

Property	To obtain units indicated below	Multiply tabulated values by
Pressure	atmosphere	× 0.9869233
	kg cm^{-2}	× 1.0197162
	mm Hg, Torr	× 750.0617
	lb in^{-2}	× 14.503830
Temperature	C	[(T,K) − 273.15]
	R	× 1.8
	F	[1.8(T,K) − 459.67]
Specific heat	cal_{th} g^{-1} K^{-1}	× 0.239006
	BTU_{IT} lb^{-1} F^{-1}	× 0.238846
	cal_{th} mol^{-1} K^{-1}	× 0.239006*M**

**M* = molecular weight.

Thermophysical Properties Research Literature Retrieval Guide, Y. S. Touloukian (Ed.), Basic Edition, 1967, Supplement 1, 1973, Plenum Publishing Corporation, New York.

PRESENTATION OF DATA

The data are presented in Section I in a uniform tabular format. On the first line of each set of data the total information reported by the author is entered whenever available. Supplemental references for each substance are given in Section II for both the liquid and gas phases separately. This feature renders the coverage most complete and comprehensive approximately as of 1974.

It should be stressed again that the data reported in this compendium consist of unevaluated original raw data from the original research literature. The units have been converted to SI units for convenience of presentation. The only liberty that has been taken in regard to the author's data values is the rounding off of the number of significant figures reported in a number of the original papers when in the judgment of the authors these were considered to be excessive and unwarranted.

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ACETALDEHYDE	CH_3CHO	-	G	273	1.177	0	Theor	-	1514
				291	1.222				
				298	1.240				
				300	1.245				
				400	1.494				
				500	1.735				
				600	1.950				
				700	2.137				
				800	2.299				
				900	2.439				
				1000	2.561				
ACETIC ACID	CH_3COOH	-	L	292.6	2.042	1	Exper	-	21788
				294.7	2.054				
		-	L	295-369	2.326	1	Exper	0.4	17523
				295-402	2.289				
ALLYL ALCOHOL	CH_2CHCH_2OH	-	L	298.15	2.403	1	Corr	-	9335
				303.15	2.515				
			G	273.16	1.225	0	Theor	-	1288
				291.16	1.285				
				298.16	1.309				
				300	1.315				
				400	1.643				
				500	1.930				
				600	2.169				
				700	2.371				
				800	2.542				
				900	2.691				
				1000	2.814				
				1100	2.925				
				1200	3.023				
				1300	3.108				
				1400	3.181				
				1500	3.246				
AMMONIA, TRIDEUTERATED	ND_3	-	G	298.2	1.903	0	Theor	-	9770
				300	1.907				
				400	2.122				
				500	2.331				
				600	2.525				
				700	2.706				
				800	2.871				
				900	3.019				
				1000	3.149				
ANILINE	$C_6H_5NH_2$	-	L	291.60	2.070	1	Exper	0.1	15949
				297.21	2.076				
				301.39	2.080				
				310.11	2.094				
				313.74	2.100				
				322.77	2.123				
		-	L	293.23	2.071	1	Exper	0.1	15949
				299.60	2.079				
				303.20	2.084				
				308.78	2.092				
				313.22	2.100				
				319.97	2.115				
		-	L	313.15	2.105	Sat.	Exper	0.4	1500
				323.15	2.121				
				333.15	2.138				
				343.15	2.155				
				353.15	2.176				
				363.15	2.192				
				373.15	2.209				
				393.15	2.243				
				413.15	2.276				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ANILINE (continued)	$C_6H_5NH_2$	99.8	L	433.15 453.15	2.310 2.347	Sat.	Exper.	0.4	1500
ARSINE	AsH_3	-	G	298.2 300 400 500 600 700 800 900 1000	0.495 0.496 0.562 0.627 0.687 0.739 0.787 0.822 0.855	0	Theor	-	9770
ARSINE, TRIDEUTERATED	AsD_3	-	G	298.2 300 400 500 600 700 800 900 1000	0.551 0.553 0.637 0.709 0.789 0.815 0.852 0.880 0.903	0	Theor	-	9770
BENZENE, HEXADEUTERATED	C_6D_6	99.8	L	283.5 286.5 293.6 298.5 303.4 308.3 313.1 317.9 322.6	1.74 1.70 1.76 1.78 1.78 1.80 1.81 1.83 1.83	1	Exper	1-2	8668
BENZOIC ACID	C_6H_5COOH	-	L	394.95	2.17	1	Exper	-	21796
p-BENZOQUINONE	$C_6H_4O_2$	-	L	386.05	1.738	1	Exper	-	21796
BENZYL ALCOHOL	$C_6H_5CH_2OH$	-	L	259.8 273.1 286.0 298.5	1.75 1.85 1.93 2.00	1	Exper	0.35-0.7	21841
BORON FLUORIDE OXIDE, TRIMERIC	$(BOF)_3$	-	G	298 300 400 500	0.852 0.855 1.021 1.140	0	Theor	-	17031
BORON TRIBROMIDE	BBr_3	-	G	298.16 300 350 400 450 500 600 700 800 900 1000	0.271 0.272 0.282 0.291 0.297 0.302 0.310 0.315 0.319 0.321 0.323	0	Theor	-	28297
BORON TRICHLORIDE	BCl_3	-	G	100 200 298.15 300 400 500 600 700 800 900 1000 1100 1200	0.348 0.461 0.535 0.536 0.587 0.620 0.643 0.658 0.669 0.676 0.682 0.687 0.690	0	Theor	-	24959

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
BORON TRICHLORIDE (continued)	BCl_3	-	G	1300	0.693	0	Theor	-	24959
				1400	0.695				
				1500	0.697				
		-	G	298.16	0.534	0	Theor	-	28297
				300	0.536				
				350	0.564				
				400	0.587				
				450	0.605				
				500	0.620				
				600	0.642				
				700	0.658				
				800	0.668				
				900	0.676				
				1000	0.682				
BROMINE, MONATOMIC	Br	-	G	55.55	0.263	0	Theor	-	6625
				555.55	0.263				
				611.10	0.264				
				722.21	0.265				
				777.77	0.266				
				833.32	0.267				
				888.88	0.268				
				944.43	0.269				
				1000.00	0.270				
				1055.55	0.272				
				1111.10	0.273				
				1222.20	0.276				
				1333.30	0.278				
				1444.40	0.281				
		-	G	55.55	0.263	0	Theor	-	20987
				555.55	0.263				
				611.11	0.264				
				666.67	0.264				
				722.21	0.265				
				777.77	0.266				
				833.32	0.267				
				888.88	0.268				
				944.43	0.269				
				999.99	0.270				
				1055.54	0.272				
				1111.10	0.273				
				1222.22	0.276				
				1333.32	0.278				
				1444.43	0.281				
		-	G	250	0.260	0	Theor	-	401
				500	0.260				
				600	0.261				
				700	0.262				
				800	0.263				
				900	0.265				
				1000	0.267				
				1100	0.279				
				1200	0.272				
				1300	0.275				
				1400	0.277				
				1500	0.279				
BROMINE CHLORIDE	BrCl	-	G	250	0.296	0	Theor	-	401
				273.16	0.300				
				298.16	0.303				
				300	0.304				
				400	0.312				
				500	0.317				
				600	0.320				
				700	0.322				
				800	0.324				
				900	0.325				
				1000	0.326				
				1100	0.326				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
BROMINE CHLORIDE (continued)	BrCl	-	G	1200	0.327	0	Theor	-	401
				1300	0.328				
				1400	0.328				
				1500	0.329				
BROMINE FLUORIDE	BrF	-	G	250	0.323	0	Theor	-	401
				273.16	0.328				
				298.16	0.333				
				300	0.333				
				400	0.349				
				500	0.359				
				600	0.366				
				700	0.370				
				800	0.373				
				900	0.376				
				1000	0.377				
				1100	0.379				
				1200	0.380				
				1300	0.382				
				1500	0.384				
BROMINE PENTAFLUORIDE	BrF_5	-	G	250	0.521	0	Theor	-	401
				273.16	0.548				
				298.16	0.572				
				300	0.574				
				400	0.642				
				500	0.680				
				600	0.702				
				700	0.717				
				800	0.727				
				900	0.733				
				1000	0.738				
				1100	0.742				
				1200	0.745				
				1300	0.747				
				1400	0.749				
				1500	0.751				
BROMOBENZENE	C_6H_5Br	-	L	250	0.932	1	Exper	2	12139
				260	0.957				
				270	0.974				
				280	0.983				
				290	0.986				
				300	0.990				
				310	0.997				
				320	1.012				
		-	L	293.15	0.964	1	Exper	-	21786
				313.15	0.975				
				333.15	0.996				
				353.15	1.025				
		-	L	298.15	0.966	1	Cited	-	9335
				303.15	0.980				
1-BROMOBUTANE	$CH_3(CH_2)_3Br$	-	L	286-330	1.2	1	Exper	-	731
				290-373	1.3				
BROMODICHLORO-METHANE	$CHBrCl_2$	-	L	300.15	0.669	1	Deriv	-	9340
		-	G	300.15	0.414	1	Deriv	-	9340
BROMOETHANE	CH_3CH_2Br	-	L	224-290	0.84	1	Exper	-	731
				239-290	0.86				
				250-290	0.88				
				280-310	0.91				
				290-310	0.93				
		-	G	345.15	0.676	1	Theor	-	28272
				413.15	0.768				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
BROMOFORM	$CHBr_3$	-	L	282-328	0.52	1	Exper	-	731
				290-372	0.53				
				290-401	0.54				
				294-420	0.55				
		-	G	100	0.202	0	Theor	-	23025
				298.16	0.289				
				1000	0.384				
				1500	0.403				
		-	G	298.1	2.827	0	Theor	-	3771
				400	3.127				
				600	3.493				
BROMOMETHANE	CH_3Br	-	L	206-282	1.14	1	Exper	-	731
				231-282	1.16				
				250-282	1.14				
		-	G	298.1	0.449	0	Theor	-	3771
				400	0.527				
				600	1.663				
				800	0.762				
				1000	0.840				
				1200	0.899				
		-	G	298.2	0.449	0	Theor	-	701
				400	0.527				
				500	0.599				
				600	0.661				
				700	0.714				
				800	0.761				
				900	0.802				
				1000	0.838				
		-	G	298.2	0.753	0	Theor	-	701
				400	0.832				
				500	0.889				
				600	0.929				
				700	0.961				
				800	0.984				
				900	1.004				
				1000	1.020				
1-BROMO-3-METHYLBUTANE	$(CH_3)_2CH(CH_2)_2Br$	-	L	285-328	1.25	1	Exper	-	731
				287-373	1.32				
1-BROMOPROPANE	$CH_3(CH_2)_2Br$	-	L	243-293	1.07	1	Exper	-	731
				284-320	1.15				
				285-340	1.17				
BROMOTRICHLORO-METHANE	CCl_3Br	-	G	100	0.257	0	Theor	-	23025
				298.16	0.430				
				1000	0.530				
				1500	0.538				
		-	G	298.16	0.430	0	Theor	-	11127
				300	0.421				
				400	0.469				
				500	0.492				
				600	0.506				
				700	0.515				
				800	0.522				
				900	0.526				
				1000	0.530				
1,3-BUTADIENE	$(CH_2CH)_2$	-	G	273	1.358	0	Theor	-	1283
				291	1.439				
				298	1.470				
				300	1.478				
				400	1.879				
				500	2.206				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1,3-BUTADIENE (continued)	$(CH_2CH)_2$	-	G	600	2.463	0	Theor	-	1283
				700	2.673				
				800	2.850				
				900	3.002				
				1000	3.134				
				1100	3.250				
				1200	3.351				
				1300	3.440				
				1400	3.517				
				1500	3.585				
		-	G	278.15	1.399	1	Exper	-	33590
				298.15	1.465				
				318.15	1.547				
				338.15	1.636				
				358.15	1.699				
				378.15	1.772				
		-	G	278.15	1.368	0	Deriv	-	33590
				298.15	1.440				
				318.15	1.527				
				338.15	1.619				
				358.15	1.686				
				378.15	1.761				
		-	G	298.16	1.470	0	Theor	-	20570
				300	1.478				
				400	1.879				
				500	2.206				
				600	2.463				
				700	2.673				
				800	2.850				
				900	3.002				
				1000	3.134				
				1100	3.250				
				1200	3.351				
				1300	3.440				
				1400	3.517				
				1500	3.585				
		-	G	300	1.385	1	Deriv	-	2500
				400	1.723				
				500	2.028				
				600	2.301				
				700	2.542				
				800	2.749				
				900	2.925				
				1000	3.069				
1-BUTANOL	$CH_3(CH_2)_3OH$	-	L	194.6	1.85	1	Exper	0.5	21783
				197.5	1.86				
				198.3	1.86				
				224.5	1.94				
				254.9	2.07				
				274.8	2.19				
				275.1	2.20				
				275.6	2.20				
				276.6	2.20				
				290.4	2.34				
				294.0	2.36				
		-	L	293.15	2.34	1	Exper	-	21778
				303.15	2.44				
		-	L	298.15	2.369	1	Cited	-	9335
				303.15	2.435				
		-	L	298.15	2.473	1	Exper	-	11120
		-	G	394	2.116	1	Exper	0.1	525
				405	1.997				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1-BUTANOL (continued)	$CH_3(CH_2)_3OH$	-	G	417	2.010	1	Exper	0.1	525
				428	2.030				
				437	2.055				
		99.95	G	395.25	2.063	1	Exper	±0.3	57382
				404.15	1.983				
				409.15	1.989				
				419.55	1.998				
				431.05	2.031				
				441.15	2.067				
				459.55	2.109				
				488.25	2.204				
				520.05	2.296				
				545.95	2.380				
				568.45	2.458				
				603.35	2.556				
		-	G	410	1.86	1	Exper	±0.6	31764
		-	G	410	1.84	0	Exper	±0.6	31764
		-	G	410	1.85	1	Theor		28272
2-BUTANOL	$CH_3CH_2CHOHCH_3$	-	G	375	2.164	1	Exper	0.1	525
				383	2.013				
				394	1.990				
				405	2.004				
				417	2.023				
				428	2.054				
				437	2.075				
		99.95	G	380.95	2.056	1	Exper	±0.3	57382
				386.25	2.007				
				393.75	1.991				
				405.15	1.990				
				406.15	1.996				
				417.25	2.015				
				440.75	2.074				
				470.85	2.178				
				515.95	2.326				
				560.35	2.457				
				582.85	2.549				
		-	G	407.15	1.767	1	Exper		28289
2-BUTANONE	$CH_3CH_2COCH_3$	-	L	193.15	2.075	1	Corr	2~5	51360
				203.15	2.079				
				213.15	2.088				
				223.15	2.096				
				233.15	2.105				
				243.15	2.117				
				253.15	2.125				
				263.15	2.142				
				273.15	2.155				
				283.15	2.171				
				293.15	2.192				
				303.15	2.209				
				313.15	2.234				
				323.15	2.259				
				333.15	2.284				
				343.15	2.318				
				353.15	2.351				
				363.15	2.393				
				373.15	2.431				
		-	G	273.15	1.339	1	Corr	1	51360
				323.15	1.506				
				373.15	1.653				
				423.15	1.799				
				473.15	1.925				
				523.15	2.050				
				573.15	2.176				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-BUTANONE (continued)	$CH_3CH_2COCH_3$	-	G	623.15	2.301	1	Corr	1	51360
				673.15	2.406				
				723.15	2.510				
				773.15	2.594				
				823.15	2.699				
				873.15	2.782				
				923.15	2.866				
				973.15	2.929				
				1023.15	3.012				
				1073.15	3.054				
				1123.15	3.117				
				1173.15	3.180				
				1223.15	3.222				
				1273.15	2.284				
		-	G	407.15	1.711	1	Exper	-	28289
		-	G	410	1.67	1	Deriv	-	28272
				410	1.70				
		-	G	410	1.72	0	Exper	0.6	31764
		-	G	410	1.73	1	Exper	0.6	31764
1-BUTENE	$CH_2CHCH_2CH_3$	-	G	273	1.482	0	Theor	-	28505
				291	1.562				
				298	1.592				
				300	1.600				
				400	2.009				
				500	2.368				
				600	2.671				
				700	2.932				
				800	3.157				
				900	3.352				
				1000	3.523				
				1100	3.672				
				1200	3.801				
				1300	3.913				
				1400	4.012				
				1500	4.097				
		-	G	298.16	1.592	0	Theor	-	198
				300	1.600				
				400	2.009				
				500	2.368				
				600	2.671				
				700	2.932				
				800	3.157				
				900	3.352				
				1000	3.523				
				1100	3.672				
				1200	3.801				
				1300	3.913				
				1400	4.012				
				1500	4.097				
		-	G	300	1.483	1	Deriv	-	2500
				400	1.885				
				500	2.251				
				600	2.577				
				700	2.863				
				800	3.110				
				900	3.319				
				1000	3.487				
		99.5	G	313.55	1.609	0.5	Exper	0.1	5608
		99.5	G	313.55	1.623	1	Exper	0.1	5608
		99.5	G	363.25	1.815	1	Exper	0.1	5608

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-BUTENE	$(CH_3CH)_2$	-	G	300	1.439	1	Deriv	-	2500
				400	1.854				
				500	2.228				
				600	2.561				
				700	2.853				
				800	3.103				
				900	3.313				
				1000	3.481				
		-	G	298.58	1.565	0	Cited	-	35191
				332.85	1.692				
				371.24	1.829				
		-	G	298.58	1.607	1	Cited	-	35191
				332.85	1.720				
				371.24	1.848				
cis-2-BUTENE	$(CH_3CH)_2$	99.8	L	133.15	2.040	Sat.	Exper	1	616
				138.71	2.028				
				144.26	2.018				
				149.82	2.010				
				155.37	2.002				
				160.93	1.996				
				166.48	1.990				
				172.04	1.986				
				177.59	1.981				
				183.15	1.981				
				188.71	1.981				
				194.26	1.982				
				199.82	1.985				
				205.37	1.989				
				210.93	1.994				
				216.48	2.002				
				222.04	2.010				
				227.59	2.021				
				233.15	2.034				
				238.71	2.047				
				244.26	2.063				
				249.82	2.080				
				255.55	2.100				
				260.93	2.121				
				266.48	2.144				
				272.04	2.169				
				277.59	2.195				
				283.15	2.223				
				288.71	2.251				
				294.26	2.282				
				299.82	2.317				
				305.37	2.347				
				310.93	2.376				
				316.48	2.412				
				322.04	2.446				
				327.59	2.489				
				333.15	2.538				
				338.71	2.595				
				344.26	2.658				
				349.82	2.722				
				355.37	2.790				
				360.93	2.864				
		-	G	273	1.306	0	Theor	-	28505
				291	1.377				
				298	1.407				
				300	1.414				
				400	1.915				
				500	2.192				
				600	2.521				
				700	2.804				
				800	3.048				
				900	3.259				
				1000	3.442				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
cis-2-BUTENE (continued)	$(CH_3CH)_2$	-	G	1100	3.601	0	Theor	-	28505
				1200	3.739				
				1300	3.859				
				1400	3.962				
				1500	4.054				
		-	G	298.16	1.407	0	Theor	-	198
				300	1.414				
				400	1.815				
				500	2.192				
				600	2.521				
				700	2.804				
				800	3.048				
				900	3.259				
				1000	3.442				
				1100	3.601				
				1200	3.739				
				1300	3.859				
				1400	3.962				
				1500	4.054				
		-	G	298.58	1.446-1.496	1	Cited	-	35191
				332.85	1.573-1.606				
				371.24	1.716-1.738				
		99.5	G	298.58	1.377-1.496	1	Exper	-	13243
				332.85	1.519-1.606				
				371.24	1.675-1.738				
trans-2-BUTENE	$(CH_3CH)_2$	-	G	273	1.472	0	Theor	-	28505
				291	1.539				
				298	1.565				
				300	1.572				
				400	1.941				
				500	2.288				
				600	2.595				
				700	2.862				
				800	3.095				
				900	3.296				
				1000	3.474				
				1100	3.628				
				1200	3.762				
				1300	3.878				
				1400	3.980				
				1500	4.068				
		-	G	298.16	1.565	0	Theor	-	198
				300	1.572				
				400	1.941				
				500	2.288				
				600	2.595				
				700	2.862				
				800	3.096				
				900	3.296				
				1000	3.474				
				1100	3.628				
				1200	3.762				
				1300	3.878				
				1400	3.980				
				1500	4.068				
		99.5	G	298.60	1.494-1.607	1	Exper	-	13243
				332.90	1.638-1.720				
				371.50	1.787-1.848				
BUTYL ACETATE	$CH_3COO(CH_2)_3CH_3$	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
BUTYLBENZENE	$C_6H_5(CH_2)_3CH_3$	-	L	191.9	1.544	1	Exper	0.05	33584
				195.8	1.552				
				210.6	1.577				
				224.8	1.602				
				255.0	1.674				
				275.5	1.720				
				287.9	1.757				
				298.2	1.791				
tert-BUTYLBENZENE	$C_6H_5C(CH_3)_3$	-	L	220.4	1.556	1	Exper	1	21826
				229.6	1.582				
				240.0	1.607				
				251.4	1.636				
				261.9	1.661				
				275.2	1.707				
				283.0	1.728				
				294.3	1.774				
BUTYL ETHER	$[CH_3(CH_2)_3]_2O$	-	L	193.15	1.966	1	Corr	-	52325
				213.15	1.987				
				233.15	2.008				
				253.15	2.050				
				273.15	2.092				
				293.15	2.134				
				313.15	2.176				
				333.15	2.218				
				353.15	2.280				
				373.15	2.343				
				393.15	2.427				
				413.15	2.510				
				433.15	2.594				
		-	G	273.15	1.464	1	Corr	1	52325
				323.15	1.653				
				373.15	1.820				
				423.15	2.008				
				473.15	2.176				
				523.15	2.343				
				573.15	2.469				
				623.15	2.573				
				673.15	2.678				
				723.15	2.782				
				773.15	2.887				
				823.15	2.971				
				873.15	3.054				
				923.15	3.117				
				973.15	3.180				
				1023.15	3.222				
				1073.15	3.243				
				1123.15	3.264				
				1173.15	3.284				
				1223.15	3.305				
				1273.15	3.326				
1-BUTYNE	$CHCCH_2CH_3$	-	G	298.16	1.505	0	Theor	-	4525
				300	1.511				
				400	1.846				
				500	2.137				
				600	2.385				
				700	2.597				
				800	2.781				
				900	2.941				
				1000	3.082				
				1100	3.204				
				1200	3.311				
				1300	3.404				
				1400	3.486				
				1500	3.557				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-BUTYNE	$(CH_3C)_2$	-	G	273	1.364	0	Theor	-	1283
				291	1.426				
				298	1.441				
				300	1.446				
				400	1.750				
				500	2.039				
				600	2.292				
				700	2.521				
				800	2.718				
				900	2.890				
				1000	3.039				
				1100	3.170				
				1200	3.283				
				1300	3.381				
				1400	3.467				
				1500	3.541				
		-	G	298.16	1.441	0	Theor	-	4525
				300	1.446				
				400	1.750				
				500	2.039				
				600	2.296				
				700	2.521				
				800	2.718				
				900	2.890				
				1000	3.039				
				1100	3.170				
				1200	3.283				
				1300	3.381				
				1400	3.467				
				1500	3.541				
		-	G	300	1.464	1	Deriv	-	2500
				400	1.801				
				500	2.102				
				600	2.368				
				700	2.598				
				800	2.793				
				900	2.949				
				1000	3.074				
		-	G	336.07	1.563	0	Cited	-	35191
				369.46	1.658				
		-	G	336.07	1.501	1	Exper	-	13243
				369.46	1.606				
CARBON, ATOMIC	C	-	G	55.55	1.863	0	Theor	-	20987
				61.10	1.841				
				66.66	1.824				
				72.21	1.810				
				77.77	1.799				
				83.32	1.791				
				88.88	1.783				
				94.43	1.777				
				99.99	1.772				
				105.55	1.768				
				111.10	1.765				
				116.66	1.762				
				122.21	1.759				
				127.77	1.757				
				133.32	1.755				
				144.43	1.751				
				155.55	1.748				
				166.66	1.746				
				177.77	1.745				
				188.88	1.743				
				199.99	1.742				
				211.10	1.741				
				222.21	1.740				
				233.32	1.739				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CARBON, ATOMIC (continued)	C	-	G	244.43	1.739	0	Theor	-	20987
				255.55	1.738				
				266.66	1.737				
				277.77	1.737				
				305.55	1.736				
				333.32	1.736				
				361.10	1.735				
				388.88	1.735				
				416.66	1.734				
				527.77	1.733				
				1444.43	1.734				
		-	G	298.16	1.735	0	Theor	-	1702
				400	1.733				
				600	1.732				
				800	1.731				
				1000	1.731				
				1200	1.731				
				1400	1.732				
CARBON DISULFIDE	CS_2	-	L	161.11	1.047	1	Theor	-	49715
				200	0.979				
				240	0.975				
				280	0.996				
				319.39	1.027				
				350	1.057				
				450	1.200				
				552	1.711				
		-	L	172.15	0.803	1	Exper	-	4306
				182.15	0.808				
				191.15	0.808				
				199.15	0.812				
				207.15	0.816				
				218.15	0.828				
				229.15	0.837				
				238.15	0.858				
				248.15	0.879				
				256.15	0.904				
				268.15	0.929				
				274.15	0.950				
				279.15	0.967				
				284.15	0.983				
				289.15	1.00				
				292.15	1.02				
		-	L	273.15	0.984	1	Cited	-	9337
				283.15	0.991				
				293.15	0.998				
				303.15	1.005				
				313.15	1.011				
				323.15	1.018				
		-	L	286.01	1.032	1	Exper	1	567
				292.60	1.035				
				297.85	1.037				
				303.27	1.041				
				308.51	1.042				
				312.95	1.045				
				316.83	1.048				
		-	L	290.7	1.21	1	Theor	-	9340
		-	L	298.15	1.001	1	Cited	-	9335
				303.15	1.004				
		-	L	319.4	0.910	1	Deriv	-	33103
		-	G	100	0.407	0	Theor	-	27459
				200	0.520				
				273.15	0.583				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CARBON DISULFIDE (continued)	CS_2	-	G	298.15	0.599	0	Theor	-	27459
				300	0.600				
				400	0.652				
				500	0.689				
				600	0.717				
				700	0.738				
				800	0.755				
				900	0.768				
				1000	0.779				
				1100	0.787				
				1200	0.794				
				1300	0.800				
				1400	0.805				
				1500	0.809				
		-	G	100	0.407	0	Theor	-	24959
				200	0.519				
				298.15	0.597				
				300	0.598				
				400	0.649				
				500	0.686				
				600	0.714				
				700	0.734				
				800	0.751				
				900	0.763				
				1000	0.773				
				1100	0.781				
				1200	0.787				
				1300	0.793				
				1400	0.797				
				1500	0.801				
		-	G	273	0.583	0	Theor	-	1344
				291	0.595				
				298	0.600				
				300	0.601				
				400	0.651				
				500	0.688				
				600	0.714				
				700	0.735				
				800	0.750				
				900	0.762				
				1000	0.770				
				1100	0.778				
				1200	0.784				
				1300	0.789				
				1400	0.792				
				1500	0.796				
		-	G	273.1	0.585	0	Theor	1	14546
				600	0.714				
				1000	0.770				
				1400	0.792				
		-	G	298.1	0.600	0	Theor	±0.1	33500
				400	0.651				
				500	0.688				
				600	0.714				
				700	0.735				
				800	0.750				
				900	0.762				
				1000	0.770				
				1100	0.778				
				1200	0.784				
				1300	0.789				
				1400	0.792				
				1500	0.796				
		-	G	298.16	0.600	0	Theor	-	1702
				300	0.601				
				400	0.651				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CARBON DISULFIDE (continued)	CS_2	-	G	500	0.688	0	Theor	-	1702
				600	0.714				
				700	0.735				
				800	0.750				
				900	0.762				
				1000	0.770				
				1100	0.778				
				1200	0.784				
				1300	0.789				
				1400	0.792				
				1500	0.796				
CARBON MONOSULFIDE	CS	-	G	100	0.660	0	Theor	-	24959
				200	0.662				
				298.15	0.676				
				300	0.676				
				400	0.703				
				500	0.730				
				600	0.754				
				700	0.773				
				800	0.787				
				900	0.799				
				1000	0.808				
				1100	0.815				
				1200	0.821				
				1300	0.826				
				1400	0.830				
				1500	0.834				
CARBON SUBOXIDE	C_3O_2	-	G	273.16	0.926	0	Theor	-	1288
				291.16	0.954				
				298.16	0.965				
				300	0.967				
				400	1.090				
				500	1.250				
				600	1.250				
				700	1.309				
				800	1.357				
				900	1.398				
				1000	1.432				
				1100	1.460				
				1200	1.483				
				1300	1.503				
				1400	1.520				
				1500	1.534				
CARBON TETRABROMIDE	CBr_4	-	L	370-438	0.52	1	Exper	-	731
				438-453	0.55				
				370-455	0.52				
		-	G	298.1	0.275	0	Theor	-	3771
				400	0.293				
				600	0.309				
		-	G	298.2	0.275	0	Theor	-	701
				400	0.293				
				500	0.303				
				600	0.309				
				700	0.313				
				800	0.316				
				900	0.318				
				1000	0.319				
		-	G	473.15	0.296	1	Deriv	-	28272
				673.15	0.310				
CARBONYL CHLORIDE FLUORIDE	COClF	-	G	100	0.417	0	Theor	-	24959
				200	0.525				
				298.15	0.635				
				300	0.637				
				400	0.720				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CARBONYL CHLORIDE FLUORIDE (continued)	COClF	-	G	500	0.781	0	Theor	-	24959
				600	0.826				
				700	0.859				
				800	0.885				
				900	0.906				
				1000	0.921				
				1100	0.934				
				1200	0.944				
				1300	0.953				
				1400	0.959				
				1500	0.965				
CARBONYL FLUORIDE	COF_2	-	G	100	0.507	0	Theor	-	24959
				200	0.589				
				298.15	0.716				
				300	0.718				
				400	0.830				
				500	0.917				
				600	0.983				
				700	1.034				
				800	1.073				
				900	1.103				
				1000	1.127				
				1100	1.146				
				1200	1.162				
				1300	1.175				
				1400	1.185				
				1500	1.194				
CARBONYL SULFIDE	COS	-	L	134.31	1.289	1	Theor	-	49715
				160.00	1.194				
				180.00	1.179				
				200.00	1.185				
				222.87	1.211				
				300.00	1.401				
				378.00	2.309				
		-	G	100	0.493	0	Theor	-	27459
				200	0.590				
				273.15	0.668				
				298.15	0.690				
				300	0.692				
				400	0.763				
				500	0.814				
				600	0.853				
				700	0.884				
				800	0.910				
				900	0.931				
				1000	0.948				
				1100	0.963				
				1200	0.975				
				1300	0.985				
				1400	0.994				
				1500	1.002				
		-	G	100	0.493	0	Theor	-	24959
				200	0.590				
				298.15	0.691				
				300	0.692				
				400	0.763				
				500	0.814				
				600	0.853				
				700	0.884				
				800	0.910				
				900	0.931				
				1000	0.948				
				1100	0.963				
				1200	0.975				
				1300	0.985				
				1400	0.994				
				1500	1.002				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CARBONYL SULFIDE (continued)	COS	-	G	273	0.668	0	Theor	-	1344
				291	0.685				
				298	0.691				
				300	0.692				
				400	0.763				
				500	0.811				
				600	0.850				
				700	0.880				
				800	0.904				
				900	0.924				
				1000	0.940				
				1100	0.953				
				1200	0.964				
				1300	0.973				
				1400	0.981				
				1500	0.987				
		-	G	298.1	0.691	0	Theor	±0.1	33580
				400	0.763				
				500	0.812				
				600	0.850				
				700	0.880				
				800	0.904				
				900	0.924				
				1000	0.940				
				1100	0.953				
				1200	0.964				
				1300	0.973				
				1400	0.981				
				1500	0.987				
		-	G	298.16	0.691	0	Theor	-	1702
				300	0.692				
				400	0.763				
				500	0.812				
				600	0.850				
				700	0.880				
				800	0.904				
				900	0.924				
				1000	0.940				
				1100	0.953				
				1200	0.964				
				1300	0.973				
				1400	0.981				
				1500	0.987				
CHLORINE, MONATOMIC	Cl	-	G	55.55	0.594	0	Theor	-	6625
				122.22	0.594				
				133.32	0.595				
				144.43	0.595				
				155.55	0.596				
				166.66	0.597				
				177.77	0.599				
				188.88	0.600				
				199.99	0.602				
				211.10	0.604				
				222.21	0.607				
				233.32	0.609				
				244.43	0.616				
				255.55	0.614				
				266.66	0.617				
				277.77	0.619				
				305.55	0.625				
				333.32	0.631				
				361.11	0.636				
				388.88	0.640				
				416.67	0.644				
				444.43	0.646				
				472.21	0.648				
				499.99	0.650				
				527.77	0.651				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLORINE, MONATOMIC (continued)	Cl	-	G	555.55	0.651	0	Theor	-	6625
				611.10	0.651				
				666.66	0.649				
				722.21	0.647				
				777.77	0.645				
				833.32	0.643				
				888.88	0.640				
				944.43	0.638				
				999.99	0.635				
				1055.55	0.633				
				1111.09	0.630				
				1166.65	0.626				
				1333.31	0.623				
				1444.42	0.620				
		-	G	55.55	0.594	0	Theor	-	20987
				127.77	0.594				
				133.32	0.595				
				144.43	0.595				
				155.55	0.596				
				166.66	0.597				
				177.77	0.599				
				188.88	0.600				
				199.99	0.602				
				211.10	0.604				
				222.21	0.607				
				233.32	0.609				
				244.43	0.612				
				255.55	0.614				
				266.66	0.617				
				277.77	0.619				
				305.55	0.626				
				333.32	0.631				
				361.10	0.636				
				388.88	0.640				
				416.66	0.644				
				444.43	0.647				
				472.21	0.648				
				499.99	0.658				
				527.77	0.651				
				611.10	0.651				
				666.67	0.649				
				722.21	0.647				
				777.77	0.645				
				833.32	0.643				
				888.88	0.640				
				944.43	0.638				
				999.99	0.635				
				1055.54	0.633				
				1111.10	0.630				
				1222.22	0.626				
				1333.32	0.623				
				1444.43	0.620				
		-	G	100	0.586	0	Theor	-	24959
				200	0.594				
				298.15	0.616				
				300	0.616				
				400	0.634				
				500	0.641				
				600	0.642				
				700	0.640				
				800	0.636				
				900	0.631				
				1000	0.627				
				1100	0.623				
				1200	0.619				
				1300	0.616				
				1400	0.613				
				1500	0.611				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLORINE, MONATOMIC (continued)	Cl	-	G	250	0.605	0	Theor	-	401
				273.18	0.613				
				298.16	0.616				
				300	0.616				
				400	0.634				
				500	0.641				
				600	0.642				
				700	0.640				
				800	0.636				
				900	0.631				
				1000	0.627				
				1100	0.623				
				1200	0.619				
				1300	0.616				
				1400	0.613				
				1500	0.611				
		-	G	298.16	0.616	0	Theor	-	1702
				400	0.634				
				600	0.643				
				800	0.636				
				1000	0.627				
				1200	0.619				
				1400	0.613				
CHLORINE DIOXIDE	ClO_2	-	G	100	0.501	0	Theor	-	24959
				200	0.557				
				298.15	0.622				
				300	0.623				
				400	0.683				
				500	0.728				
				600	0.761				
				700	0.785				
				800	0.803				
				900	0.817				
				1000	0.827				
				1100	0.835				
				1200	0.842				
				1300	0.848				
				1400	0.853				
				1500	0.857				
		-	G	250	0.589	0	Theor	-	401
				273.16	0.604				
				298.16	0.620				
				300	0.621				
				400	0.680				
				500	0.725				
				600	0.758				
				700	0.782				
				800	0.800				
				900	0.814				
				1000	0.824				
				1100	0.832				
				1200	0.839				
				1300	0.844				
				1400	0.848				
				1500	0.852				
CHLORINE FLUORIDE	ClF	-	G	250	0.572	0	Theor	-	401
				273.16	0.580				
				298.16	0.589				
				300	0.590				
				400	0.620				
				500	0.640				
				600	0.654				
				700	0.664				
				800	0.671				
				900	0.676				
				1000	0.680				
				1100	0.683				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLORINE FLUORIDE (continued)	ClF	-	G	1200	0.686	0	Theor	-	401
				1300	0.688				
				1400	0.690				
				1500	0.692				
CHLORINE MONOXIDE	Cl_2O	-	G	100	0.404	0	Theor	-	24959
				200	0.466				
				298.15	0.523				
				300	0.523				
				400	0.565				
				500	0.593				
				600	0.612				
				700	0.626				
				800	0.635				
				900	0.641				
				1000	0.646				
				1100	0.650				
				1200	0.653				
				1300	0.655				
				1400	0.657				
				1500	0.659				
		-	G	250	0.639	0	Theor	-	401
				273.16	0.657				
				298.16	0.676				
				300	0.676				
				400	0.726				
				500	0.763				
				600	0.788				
				700	0.806				
				800	0.819				
				900	0.825				
				1000	0.831				
				1100	0.837				
				1200	0.843				
				1300	0.843				
				1400	0.850				
				1500	0.850				
CHLORINE OXIDE	ClO	-	G	100	0.566	0	Theor	-	24959
				200	0.579				
				298.15	0.613				
				300	0.614				
				400	0.646				
				500	0.670				
				600	0.686				
				700	0.698				
				800	0.706				
				900	0.713				
				1000	0.718				
				1100	0.722				
				1200	0.725				
				1300	0.728				
				1400	0.731				
				1500	0.733				
CHLORINE TRIFLUORIDE	ClF_3	-	G	250	0.655	0	Theor	-	401
				273.16	0.680				
				298.16	0.704				
				300	0.705				
				400	0.772				
				500	0.811				
				600	0.835				
				700	0.851				
				800	0.861				
				900	0.869				
				1000	0.874				
				1100	0.878				
				1200	0.882				
				1300	0.884				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLORINE TRIFLUORIDE (continued)	ClF_3	-	G	1400 1500	0.887 0.888	0	Theor	-	401
CHLOROBENZENE	C_6H_5Cl	99.9	L	230 240 250 260 270 280 290 300 310 320	1.220 1.264 1.292 1.309 1.318 1.324 1.329 1.334 1.345 1.367	1	Exper	2	12139
		-	L	293.15 303.15 313.15 323.15	1.32 1.35 1.37 1.40	1	Cited	-	9337
		-	L	293.15 313.15 333.15 353.15	1.294 1.319 1.363 1.425	1	Exper	-	21786
		-	L	298.15 303.15	1.300 1.307	1	Deriv	-	9335
m-CHLOROBENZOIC ACID	ClC_6H_4COOH	-	L	427.40	1.73	1	Exper	-	21796
o-CHLOROBENZOIC ACID	ClC_6H_4COOH	-	L	413.35	1.85	1	Exper	-	21796
p-CHLOROBENZOIC ACID	ClC_6H_4COOH	-	L	512.85	2.29	1	Exper	-	21796
CHLORODIFLUORO-METHANE, MONODEUTERATED	$CDClF_2$	-	G	100 200 273.16 298.16 300 400 500 600 700 800 900 1000	0.398 0.526 0.629 0.663 0.665 0.781 0.871 0.939 0.990 1.029 1.059 1.084	0	Theor	-	32482
CHLORODIPHENYL-METHANE	$(C_6H_5)_2CHCl$	-	L	298.5 310.7	1.43 1.46	1	Exper	0.35~0.7	21841
CHLOROETHANE	CH_3CH_2Cl	-	L	205-288 231-288 266-288	1.57 1.61 1.64	1	Exper	-	731
		-	G	345.65 398.15	1.17 1.28	1	Deriv	-	28272
CHLOROFLUORO-METHANE	CH_2ClF	-	G	200 250 300 350 400 450 500 550 600 650 700 750 800 850 900	0.580 0.633 0.693 0.755 0.817 0.874 0.927 0.976 1.019 1.059 1.095 1.128 1.159 1.186 1.212	0	Theor	-	34113

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CHLOROFLUORO-METHANE (continued)	CH_2ClF	-	G	950 1000	1.236 1.257	0	Theor	-	34113
		-	G	298.1 373.1	0.703 0.800	1	Deriv	-	28292
1-CHLORO-3-METHYL-BUTANE	$(CH_3)_2CHCH_2CH_2Cl$	-	L	287-327 287-371	1.67 1.73	1	Exper	-	731
CHLOROMETHYLIDYNE	*CCl*	-	G	298.16 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500	0.682 0.683 0.710 0.730 0.745 0.755 0.763 0.768 0.773 0.776 0.778 0.781 0.782 0.784	0	Theor	-	32540
1-CHLORO-2-METHYL-PROPANE	$(CH_3)_2CHCH_2Cl$	-	L	285-353 285-328 287-332 288-295	1.17 1.14 1.75 1.48	1	Exper	-	731
1-CHLOROPROPANE	$CH_3(CH_2)_2Cl$	-	L	234-289 285-316 290-373 290-403 290-428	1.57 1.69 1.02 1.04 1.07	1	Exper	-	731
CHLOROSILANE	SiH_3Cl	-	G	100 200 298.16 300 400 500 600 700 800 900 1000	0.504 0.602 0.757 0.760 0.899 1.013 1.105 1.182 1.246 1.299 1.343	0	Theor	-	12098
α-CHLOROTOLUENE	$C_6H_5CH_2Cl$	-	L	246.0 259.8 273.1 286.0 298.5	1.37 1.39 1.40 1.42 1.44	1	Exper	0.35-0.7	21841
CHLOROTRIBROMO-METHANE	$CClBr_3$	-	G	100 298.16 1000 1500	0.206 0.311 0.368 0.372	0	Theor	-	23025
CUMENE	$C_6H_5CH(CH_3)_2$	-	L	283.15 293.15 303.15 313.15 323.15 333.15 343.15 353.15 363.15 373.15 383.15 393.15 403.15	1.920 1.941 1.966 1.983 2.000 2.021 2.042 2.059 2.079 2.100 2.121 2.151 2.176	1	Corr	±2.1	56305

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CUMENE (continued)	$C_6H_5CH(CH_3)_2$	-	L	413.15	2.208	1	Corr	±2.1	56305
				423.15	2.234				
				433.15	2.259				
				443.15	2.293				
				453.15	2.330				
				463.15	2.368				
				473.15	2.414				
		99.8	L	290-323	1.81	1	Exper	1	1562
				293-373	1.90				
				293-405	1.97				
				293-426	1.99				
		99.8	L	299.82	1.742	Sat.	Exper	1	616
				305.37	1.765				
				310.93	1.786				
				316.49	1.808				
				322.04	1.830				
				327.59	1.853				
				333.15	1.876				
				338.71	1.901				
				344.26	1.926				
				349.82	1.951				
				355.37	1.976				
				360.93	2.000				
				366.48	2.025				
		-	G	273	1.159	0	Theor	-	28506
				291	1.231				
				298	1.262				
				300	1.270				
				400	1.671				
				500	2.016				
				600	2.305				
				700	2.538				
				800	2.736				
				900	2.900				
				1000	3.039				
				1100	3.161				
				1200	3.265				
				1300	3.356				
				1400	3.432				
				1500	3.502				
		-	G	298.16	1.262	0	Theor	-	5162
				300	1.270				
				400	1.671				
				500	2.016				
				600	2.305				
				700	2.538				
				800	2.736				
				900	2.900				
				1000	3.039				
				1100	3.161				
				1200	3.265				
				1300	3.356				
				1400	3.432				
				1500	3.502				
		-	G	673.15	2.385	1	Corr	-	56305
				723.15	2.510				
				773.15	2.594				
				823.15	2.720				
				873.15	2.887				
				923.15	2.887				
				973.15	2.971				
				1023.15	3.033				
				1073.15	3.096				
				1123.15	3.159				
				1173.15	3.222				
				1223.15	3.264				
				1273.15	3.305				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CYANOGEN	$(CN)_2$	-	G	100	0.704	0	Theor	-	24959
				200	0.942				
				298.15	1.092				
				300	1.094				
				400	1.188				
				500	1.256				
				600	1.311				
				700	1.359				
				800	1.400				
				900	1.436				
				1000	1.467				
				1100	1.493				
				1200	1.515				
				1300	1.534				
				1400	1.550				
				1500	1.563				
		-	G	291.16	1.085	0	Theor	-	8059
				298.16	1.093				
				300	1.096				
				350	1.147				
				400	1.183				
				450	1.224				
				500	1.257				
				600	1.312				
				700	1.360				
				800	1.401				
				900	1.437				
				1000	1.467				
		-	G	298.16	1.093	0	Theor	-	1702
				300	1.095				
				400	1.190				
				500	1.257				
				600	1.312				
				700	1.360				
				800	1.401				
				900	1.437				
				1000	1.467				
CYANOGEN CHLORIDE	CNCl	-	G	100	0.508	0	Theor	-	27459
				200	0.642				
				273.15	0.711				
				298.15	0.729				
				300	0.731				
				400	0.783				
				500	0.819				
				600	0.846				
				700	0.869				
				800	0.889				
				900	0.905				
				1000	0.919				
				1100	0.931				
				1200	0.941				
				1300	0.950				
				1400	0.957				
				1500	0.963				
		-	G	100	0.508	0	Theor	-	24959
				200	0.642				
				298.15	0.730				
				300	0.731				
				400	0.783				
				500	0.819				
				600	0.846				
				700	0.869				
				800	0.889				
				900	0.905				
				1000	0.919				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CYANOGEN CHLORIDE (continued)	CNCl	-	G	1100	0.931	0	Theor	-	24959
				1200	0.941				
				1300	0.950				
				1400	0.957				
				1500	0.963				
CYCLOHEXANE	C_6H_{12}	99.9	L	279.99	1.774	1	Exper	1	9823
				282.26	1.784				
				286.87	1.806				
				288.31	1.813				
				291.73	1.828				
				296.22	1.848				
				296.54	1.848				
				301.29	1.872				
		-	L	283.1	1.766	1	Exper	1	31769
				285.1	1.770				
				286.6	1.778				
				290.7	1.799				
				298.9	1.841				
		-	L	299.82	1.833	Sat.	Exper	±3	1824
				305.37	1.861				
				310.93	1.886				
				316.40	1.913				
				322.04	1.943				
				327.59	1.968				
				333.15	1.995				
				338.71	2.024				
				344.26	2.051				
				349.82	2.077				
				355.37	2.108				
				360.93	2.139				
				366.48	2.173				
		-	G	298.16	1.250	0	Theor	-	20570
				300	1.260				
				400	1.783				
				500	2.258				
				600	2.657				
				700	2.990				
				800	3.270				
				900	3.505				
				1000	3.704				
				1100	3.874				
				1200	4.018				
				1300	4.141				
				1400	4.247				
				1500	4.338				
		-	G	370	1.661	1	Exper	±0.3	33588
				390	1.759				
				410	1.846				
		-	G	370	1.730	0	Exper	±0.3	33588
				390	1.814				
				410	1.909				
		-	G	370.15	1.98	1	Exper	-	14727
				373.15	1.73				
				407.15	1.97				
				410.15	1.86				
		-	G	410	1.85	1	Exper	-	31764
		-	G	410	1.84	0	Exper	-	31764
CYCLOHEXENE	C_6H_{10}	-	G	370	1.595	1	Exper	0.3	33588
				390	1.686				
				410	1.771				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
CYCLOHEXENE (continued)	C_6H_{10}	-	G	370	1.516	0	Exper	0.3	33588
				390	1.596				
				410	1.675				
CYCLOPROPANE	C_3H_6	-	G	100	0.791	0	Cited	-	35191
				150	0.820				
				200	0.925				
				250	1.108				
				300	1.336				
				350	1.579				
				400	1.823				
				500	2.251				
				600	2.599				
				700	2.887				
				800	3.127				
				900	3.338				
				1000	3.517				
		-	G	157.6	0.831	0	Corr	-	3771
				220.2	0.990				
				223.4	1.002				
				258.4	1.143				
				291.1	1.296				
				295.4	1.312				
				313.9	1.405				
				325.3	1.461				
				332.9	1.498				
				338.9	1.525				
		99.75	G	272.15	1.203	1	Exper	0.4	13244
				300.48	1.342				
				333.70	1.501				
				368.46	1.667				
p-CYMENE	$CH_3C_6H_4CH(CH_3)_2$	-	L	210.8	1.536	1	Exper	0.05	33584
				215.9	1.548				
				228.2	1.573				
				243.3	1.607				
				259.6	1.644				
				280.7	1.711				
				291.0	1.745				
				297.1	1.761				
		-	L	283-328	1.83	1	Exper	-	1562
				288-373	1.91				
				288-405	1.97				
				288-429	2.01				
DEUTERIUM, MONATOMIC	D	-	G	55-2775	10.39	0	Theor	-	20987
		-	G	55-1500	10.32	0	Theor	-	6625
1,2-DIBROMOETHANE	$(CH_2Br)_2$	-	L	290-329	0.73	1	Exper	-	731
				290-373	0.76				
				291-400	0.78				
DIBROMOMETHANE	CH_2Br_2	-	L	240.0	0.603	1	Exper	±0.5	1353
				244.9	0.603				
				250.0	0.604				
				253.9	0.604				
				260.0	0.599				
				265.0	0.602				
				270.0	0.596				
				274.3	0.598				
				280.0	0.596				
				284.1	0.594				
				290.0	0.599				
				294.2	0.602				
				300.0	0.606				
				303.2	0.607				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
DIBROMOMETHANE (continued)	CH_2Br_2	-	L	293-295	0.71	1	Exper	-	731
				283-308	0.73				
				288-315	0.74				
				288-371	0.76				
		-	G	298.1	0.316-0.343	0	Cited	-	3771
				400	0.364-0.390				
				500	0.402				
				600	0.450-0.456				
		-	G	298.2	0.315	0	Theor	-	701
				400	0.363				
				500	0.401				
				600	0.431				
				700	0.455				
				800	0.475				
				900	0.492				
				1000	0.507				
		-	G	473.15	0.426	1	Deriv	-	28272
				673.15	0.469				
1,2-DIBROMOPROPANE	$BrCH_2CHBrCH_3$	-	L	284-327	0.80	1	Exper	-	731
				292-373	0.84				
				287-406	0.87				
1,3-DIBROMOPROPANE	$Br(CH_2)_3Br$	-	L	293-371	0.83	1	Exper	-	731
				294-397	0.84				
				289-427	0.87				
1,1-DICHLOROETHANE	CH_3CHCl_2	-	L	222-262	1.20	1	Exper	-	731
				291-318	1.29				
				291-328	1.26				
				289-328	1.31				
1,2-DICHLOROETHANE	$(CH_2Cl)_2$	-	L	248-293	1.17	1	Exper	-	731
				290-327	1.27				
				292-344	1.29				
				289-355	1.30				
		-	L	280.77	1.297	1	Exper	-	1183
				280.87	1.290				
				280.85	1.285				
				293.65	1.300				
				293.56	1.300				
				293.73	1.297				
				293.48	1.306				
				293.60	1.299				
				308.71	1.324				
				308.76	1.330				
				308.92	1.326				
				308.74	1.323				
				308.89	1.321				
				323.70	1.369				
				323.76	1.327				
				323.70	1.326				
				323.76	1.321				
		-	L	284.15	1.312	1	Exper	±1	567
				287.85	1.318				
				292.17	1.329				
				293.15	1.331				
				296.87	1.339				
				302.63	1.344				
				303.15	1.345				
				308.32	1.350				
				313.15	1.356				
				313.61	1.355				
				318.75	1.363				
				323.15	1.367				
				323.75	1.370				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1,2-DICHLOROETHANE (continued)	$(CH_2Cl)_2$	-	L	328.67	1.375	1	Exper	±1	567
				333.53	1.384				
				338.26	1.394				
				343.15	1.382				
				343.17	1.406				
				348.03	1.416				
				353.15	1.406				
		-	L	293.15	1.255	1	Exper	-	1831
1,2-DICHLOROETHYLENE	$(CHCl)_2$	-	L	284-311	1.14	1	Exper	-	731
				286-327	1.07				
				288-242	1.07				
1,1-DICHLORO-1-FLUOROETHANE	CH_3CFCl_2	-	G	305.15	0.768	0	Theor	-	32178
				400	0.890				
				600	1.068				
DICHLOROFLUORO-METHANE, MONODEUTERATED	$CDCl_2F$	-	G	100	0.358	0	Theor	-	32482
				200	0.491				
				273.16	0.581				
				298.16	0.609				
				300	0.611				
				400	0.704				
				500	0.772				
				600	0.822				
				700	0.839				
				800	0.888				
				900	0.910				
				1000	0.928				
DICHLOROMETHANE	CH_2Cl_2	-	L	193.15	0.879	1	Exper	±0.15	56674
				203.15	0.891				
				213.15	0.905				
				223.15	0.920				
				233.15	0.938				
				243.15	0.958				
				253.15	0.980				
				263.15	1.004				
				273.15	1.029				
				283.15	1.055				
				293.15	1.081				
		-	L	219-261	1.35	1	Exper	-	731
				197-285	1.31				
				252-285	1.40				
				285-314	1.50				
		-	G	173.15	0.484	0	Theor	-	1578
				198.15	0.507				
				223.15	0.533				
				248.15	0.559				
				273.15	0.587				
				298.15	0.615				
				323.15	0.642				
				348.15	0.669				
				373.15	0.695				
				398.15	0.762				
				423.15	0.784				
		-	G	273	0.583	0	Theor	-	1360
				291	0.603				
				298	0.610				
				300	0.613				
				400	0.717				
				500	0.801				
				600	0.867				
				700	0.920				
				800	0.963				
				900	1.000				
				1000	1.031				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
DICHLOROMETHANE (continued)	CH_2Cl_2	-	G	1100	1.058	0	Theor	-	1360
				1200	1.081				
				1300	1.001				
				1400	1.119				
				1500	1.133				
		-	G	273.15	0.584	0	Theor	<3	15361
				283.15	0.596				
				293.15	0.607				
				298.15	0.613				
				303.15	0.618				
				313.15	0.629				
				323.15	0.640				
				333.15	0.651				
				353.15	0.672				
				373.15	0.693				
				473.15	0.783				
				573.15	0.853				
				673.15	0.908				
				773.15	0.954				
		-	G	273.15	0.584	0	Cited	-	3771
				298.15	0.613				
				313.15	0.629				
				333.15	0.651				
				353.15	0.672				
				373.15	0.693				
				473.15	0.783				
				573.15	0.853				
				673.15	0.908				
				773.15	0.954				
		-	G	298.1	0.611	1	Deriv	-	28292
				373.1	0.695				
				473.1	0.783				
		-	G	370.15	0.680	1	Exper	-	28289
				407.15	0.729				
		-	G	473.15	0.503	0	Theor	-	34113
				523.15	0.555				
				573.15	0.609				
				623.15	0.662				
				673.15	0.712				
				723.15	0.756				
				773.15	0.796				
				823.15	0.832				
				873.15	0.864				
				923.15	0.893				
				973.15	0.919				
				1023.15	0.943				
				1073.15	0.965				
				1123.15	0.985				
				1173.15	1.004				
				1223.15	1.021				
				1273.15	1.037				
1,2-DICHLOROPROPANE	$CH_3CHClCH_2Cl$	-	L	284-327	1.37	1	Exper	-	731
				290-372	1.46				
				289-429	1.54				
1,1-DICHLOROTETRA-FLUOROETHANE	CCl_2FCF_3	-	G	276.9	0.641	0	Theor	-	32178
				298	0.667				
				400	0.760				
				600	0.897				
2,2-DICHLORO-1,1,1-TRIFLUOROETHANE	F_3CCHCl_2	-	G	200	0.531	0	Theor	-	3933
				298.16	0.667				
				400	0.782				
				500	0.867				
				600	0.984				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2,2-DICHLORO-1,1,1-TRIFLUOROETHANE (continued)	F_3CCHCl_2	-	G	700 800	0.984 1.022	0	Theor	-	3933
DIETHYL OXALATE	$(COOCH_2CH_3)_2$	-	L	273.15	1.814	1	Exper	0.25	1790
1,1-DIFLUOROETHYLENE	CH_2CF_2	-	L	153.15 163.15 173.15 183.15 193.15 203.15 213.15 223.15 233.15 243.15 253.15 263.15 273.15	0.966 0.979 0.992 1.004 1.017 1.209 1.046 1.059 1.079 1.100 1.125 1.151 1.184	1	Corr	-	49049
		-	G	173.15 223.15 273.15 323.15 373.15 423.15 473.15 523.15 573.15 623.15 673.15 723.15 773.15 823.15 873.15 923.15 973.15 1023.15 1073.15 1123.15 1173.15	0.628 0.732 0.837 0.941 1.046 1.130 1.213 1.276 1.339 1.402 1.464 1.506 1.548 1.590 1.632 1.653 1.674 1.694 1.715 1.736 1.757	1	Corr	<1	49090
DIFLUOROMETHANE	CH_2F_2	-	G	200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000	0.707 0.763 0.833 0.911 0.992 1.070 1.145 1.213 1.276 1.333 1.386 1.434 1.478 1.518 1.555 1.589 1.621	0	Theor	-	34113
		-	G	298.1 373.1 473.1	0.837 0.957 1.110	1	Deriv	-	28292
DIIODOMETHANE	CH_2I_2	-	L	285-329 288-373 288-437	0.50 0.52 0.54	1	Exper	-	731
DIMETHYLAMINE	$(CH_3)_2NH$	-	G	273.15 291.15 298.15	1.437 1.504 1.531	0	Theor	-	1231

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
DIMETHYLAMINE (continued)	$(CH_3)_2NH$	-	G	373.15	1.832	0	Theor	-	1231
				473.15	2.219				
				573.15	2.555				
				673.15	2.846				
				773.15	3.094				
				873.15	3.310				
				973.15	3.498				
				1073.15	3.661				
				1173.15	3.803				
				1273.15	3.927				
				1373.15	4.034				
				1473.15	4.126				
2,2-DIMETHYLBUTANE	$CH_3CH_2C(CH_3)_3$	99.985	L	180	1.753	1	Exper	0.2	8669
				190	1.783				
				200	1.815				
				210	1.848				
				220	1.881				
				230	1.915				
				240	1.950				
				250	1.990				
				260	2.030				
				270	2.072				
				280	2.114				
				290	2.156				
				300	2.198				
		99.95	L	180	1.703	1	Exper	2	12139
				190	1.731				
				200	1.761				
				210	1.789				
				220	1.819				
				230	1.850				
				240	1.882				
				250	1.913				
				260	1.945				
				270	1.982				
				280	2.022				
				290	2.074				
				300	2.138				
				310	2.221				
				320	2.336				
		-	L	299.82	2.224	Sat.	Exper	±3	1824
				305.37	2.250				
				310.93	2.273				
				316.48	2.296				
				322.04	2.321				
				327.59	2.345				
				333.15	2.371				
				338.71	2.396				
				344.26	2.420				
				349.82	2.443				
				355.55	2.470				
				360.93	2.495				
				366.48	2.531				
		-	G	298.16	1.663	0	Theor	-	20085
				300	1.672				
				400	2.146				
				500	2.573				
				600	2.933				
				700	3.229				
				800	3.481				
				900	3.685				
				1000	3.880				
		99.7	G	341.55	1.8644	0.4	Exper	0.2	1815
				376.05	2.0230				
				412.40	2.1435				
				449.40	2.3506				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2,2-DIMETHYLBUTANE (continued)	$CH_3CH_2C(CH_3)_3$	99.7	G	341.55	1.8870	1	Exper	0.2	1815
				353.20	1.9364				
				376.05	1.7517				
				412.40	2.1983				
				449.40	2.3564				
		99.7	G	341.55	1.8501	0	Deriv	0.2	1815
				353.20	1.9058				
				376.05	2.0150				
				412.40	2.1824				
				449.40	2.3757				
		99	G	361	2.336	1	Exper	0.3-1.0	2542
				391	2.488				
				448	2.784				
		99	G	361	2.343	0	Deriv	0.3-1.0	2542
				391	2.470				
				448	2.772				
		86	G	451	2.364	1	Exper	0.8-1	1384
2,3-DIMETHYLBUTANE	$[(CH_3)_2CH]_2$	99.95	L	140	1.740	1	Exper	2	12139
				150	1.776				
				160	1.810				
				170	1.845				
				180	1.876				
				190	1.906				
				200	1.939				
				210	1.966				
				220	1.990				
				230	2.005				
				240	2.017				
				250	2.031				
		99.985	L	150	1.691	1	Exper	0.2	8669
				160	1.717				
				170	1.743				
				180	1.770				
				190	1.799				
				200	1.828				
				210	1.857				
				220	1.888				
				230	1.921				
				240	1.956				
				250	1.792				
				260	2.030				
				270	2.070				
				280	2.112				
				290	2.154				
				300	2.199				
		99.7	L	260	2.048	1	Exper	0.2	12139
				270	2.066				
				280	2.086				
				290	2.108				
				300	2.147				
				310	2.204				
				320	2.297				
		-	G	298.16	1.682	0	Theor	-	20085
				300	1.692				
				400	2.151				
				500	2.564				
				600	2.913				
				700	3.200				
				800	3.452				
				900	3.666				
				1000	3.855				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1,2-DIMETHYLCYCLO-PENTANE	$C_5H_8(CH_3)_2$	-	L	161.5	1.523	1	Exper	0.05	33584
				175.2	1.552				
				195.0	1.611				
				210.0	1.644				
				244.6	1.732				
				275.4	1.837				
				284.1	1.866				
				294.2	1.908				
2,3-DIMETHYLHEXANE	$(CH_3)_2CHCH(CH_3)(CH_2)_2CH_3$	99	G	397.4	2.145	1	Exper	1	980
				463.7	2.414				
				522.2	2.629				
2,5-DIMETHYLHEXANE	$[(CH_3)_2CHCH_2]_2$	-	L	278.15	2.096	Sat.	Exper	0.1	1781
				283.15	2.117				
				288.15	2.138				
				293.15	2.159				
				298.15	2.181				
				303.15	2.203				
				308.15	2.226				
				313.15	2.248				
				318.15	2.271				
3,3-DIMETHYLHEXANE	$CH_3CH_2C(CH_3)_2(CH_2)_2CH_3$	-	L	278.15	2.068	Sat.	Exper	0.1	1781
				283.15	2.090				
				288.15	2.113				
				293.15	2.135				
				298.15	2.158				
				303.15	2.182				
				308.15	2.206				
				313.15	2.230				
				318.15	2.255				
3,4-DIMETHYLHEXANE	$[CH(CH_3)CH_2CH_3]_2$	98	G	406.7	2.183	1	Exper	1	980
				462.3	2.368				
				522.6	2.632				
2,7-DIMETHYLOCTANE	$[(CH_3)_2CH(CH_2)_2]_2$	-	L	223.2	1.895	1	Exper	<1	31769
				227.5	1.904				
				244.5	1.954				
				275.0	2.059				
				278.2	2.063				
				283.3	2.084				
				289.4	2.096				
				295.0	2.121				
DIMETHYLPROPANE	$C(CH_3)_4$	-	G	298.16	1.686	0	Theor	-	20085
				300	1.694				
				400	2.178				
				500	2.610				
				600	2.970				
				700	3.271				
				800	3.625				
				900	3.743				
				1000	3.932				
				1100	4.095				
				1200	4.236				
				1300	4.358				
				1400	4.465				
				1500	4.558				
2,5-DIMETHYL-THIOPHENE	$C_4H_2S(CH_3)_2$	-	L	220	1.471	1	Exper	-	20068
				230	1.482				
				240	1.494				
				250	1.509				
				260	1.524				
				270	1.540				
				280	1.557				
				290	1.575				
				300	1.593				
				273.15	1.545				
				298.15	1.589				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
m-DINITROBENZENE	$C_6H_4(NO_2)_2$	-	L	363.23	1.697	1	Exper	-	21796
o-DINITROBENZENE	$C_6H_4(NO_2)_2$	-	L	390.08	1.623	1	Exper	-	21796
p-DINITROBENZENE	$C_6H_4(NO_2)_2$	-	L	446.65	1.648	1	Exper	-	21796
1,1-DIPHENYLETHANE	$(C_6H_5)_2CHCH_3$	-	L	259.8	1.49	1	Exper	0.35-0.7	21841
				273.1	1.54				
				286.0	1.58				
				298.5	1.62				
DIPHENYLMETHANE	$(C_6H_5)_2CH_2$	-	L	310.7	1.63	1	Exper	0.35-0.7	21841
				322.6	1.64				
DIPROPYLENE GLYCOL	$(CH_3CHOHCH_2)_2O$	-	L	283.15	2.364	1	Corr	-	52070
				293.15	2.406				
				303.15	2.448				
				313.15	2.489				
				323.15	2.552				
				333.15	2.594				
				343.15	2.636				
				353.15	2.678				
				363.15	2.741				
				373.15	2.782				
				383.15	2.824				
				393.15	2.866				
				403.15	2.908				
				413.15	2.971				
				423.15	3.012				
				433.15	3.054				
				443.15	3.096				
				453.15	3.138				
		-	G	273.15	1.276	1	Corr	-	52070
				298.15	1.339				
				323.15	1.402				
				348.15	1.464				
				373.15	1.527				
				398.15	1.590				
				423.15	1.640				
				448.15	1.695				
				473.15	1.749				
				498.15	1.799				
				523.15	1.841				
				548.15	1.883				
				573.15	1.925				
				598.15	1.958				
				623.15	1.987				
				648.15	2.017				
				673.15	2.050				
				698.15	2.084				
				723.15	2.113				
				748.15	2.134				
				773.15	2.155				
DODECANE	$CH_3(CH_2)_{10}CH_3$	99.93	L	266.69	2.137	1	Exper	±0.1	550
				270	2.141				
				272.39	2.143				
				272.82	2.146				
				280	2.160				
				281.20	2.163				
				283.06	2.166				
				290	2.184				
				290.28	2.185				
				293.61	2.194				
				298.16	2.207				
				299.25	2.211				
				300	2.213				
				304.03	2.225				
				308.13	2.237				
				310	2.243				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
DODECANE (continued)	$CH_3(CH_2)_{10}CH_3$	99.83	L	317.41	2.267	1	Exper	±0.1	550
				320	2.275				
		-	L	275.1	2.134	1	Exper	0.05	33584
				282.9	2.151				
				289.7	2.167				
				297.7	2.180				
		-	G	298.16	1.710	0	Theor	-	1702
				300	1.724				
				400	2.133				
				500	2.531				
				600	2.853				
				700	3.133				
				800	3.374				
				900	3.580				
				1000	3.762				
				1100	3.917				
				1200	4.054				
				1300	4.174				
				1400	4.275				
				1500	4.361				
ETHANE, HEXADEUTERATED	C_2D_6	-	G	272.23	1.657	1	Exper	0.3	11641
				304.06	1.817				
				334.90	1.969				
				365.97	2.113				
ETHANETHIOL	C_2H_5SH	-	G	298	1.183	0	Theor	-	30281
				1000	2.380				
		-	G	298.16	1.18	0	Theor	-	948
				400	1.44				
				500	1.67				
				600	1.85				
				700	2.02				
				800	2.15				
				900	2.26				
				1000	2.37				
ETHYL ACETATE	$CH_3COOCH_2CH_3$	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
		-	G	370.25	1.491	1	Exper	-	14170
				407.15	1.610				
				346.15	1.411				
				370.15	1.491				
				385.15	1.553				
				407.15	1.610				
				410.15	1.600				
				440.15	1.676				
		-	G	410	1.60	1	Exper	±0.6	31764
		-	G	410	1.59	0	Exper	-	31764
ETHYLBENZENE	$C_6H_5C_2H_5$	-	L	184.4	1.43	1	Exper	0.35-0.7	21841
				201.1	1.47				
				216.8	1.50				
				231.7	1.53				
				246.0	1.57				
				259.8	1.62				
				273.1	1.65				
				286.0	1.69				
				298.5	1.73				
		-	L	185.0	1.473	1	Exper	<1	21826
				188.4	1.481				
				194.0	1.490				
				210.7	1.523				
				220.2	1.540				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ETHYLBENZENE (continued)	$C_6H_5C_2H_5$	-	L	230.5	1.556	1	Exper	<1	21826
				239.1	1.577				
				254.9	1.611				
				275.3	1.657				
				278.4	1.665				
				283.0	1.682				
				287.9	1.690				
				293.0	1.703				
				297.4	1.711				
				301.2	1.724				
				304.9	1.732				
		-	L	273.15	1.674	1	Corr	±2.1	56305
				283.15	1.690				
				293.15	1.711				
				303.15	1.724				
				313.15	1.741				
				323.15	1.757				
				333.15	1.774				
				343.15	1.791				
				353.15	1.816				
				363.15	1.833				
				373.15	1.858				
				383.15	1.887				
				393.15	1.916				
				403.15	1.941				
				413.15	1.971				
				423.15	1.996				
				433.15	2.025				
				444.15	2.050				
				453.15	2.083				
				463.15	2.117				
				473.15	2.151				
		-	L	288-329	1.80	1	Exper	-	1562
				288-373	1.90				
				288-404	1.97				
				289-451	2.10				
		-	L	291.15	1.548	1	Exper	-	21776
				293.15	1.602				
				295.15	1.648				
				297.15	1.695				
				299.15	1.728				
				301.15	1.728				
				303.15	1.715				
				305.15	1.711				
				307.15	1.715				
				309.15	1.724				
				313.15	1.736				
				323.15	1.774				
				333.15	1.807				
				343.15	1.841				
		-	L	293.15	1.675	1	Exper	-	21778
				303.15	.710				
				408.95	2.300				
		-	G	273	1.111	0	Theor	-	28506
				291	1.180				
				298	1.210				
				300	1.217				
				400	1.606				
				500	1.945				
				600	2.224				
				700	2.455				
				800	2.647				
				900	2.809				
				1000	2.947				
				1100	3.065				
				1200	3.167				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ETHYLBENZENE (continued)	$C_6H_5C_2H_5$	-	G	1300	3.254	0	Theor	-	28506
				1400	3.330				
				1500	3.396				
		-	G	273.15	1.109	1	Corr	-	56305
				323.15	1.297				
				373.15	1.485				
				423.15	1.674				
				473.15	1.820				
				523.15	1.987				
				573.15	2.134				
				623.15	2.259				
				673.15	2.305				
				723.15	2.469				
				773.15	2.552				
				823.15	2.657				
				873.15	2.741				
				923.15	2.824				
				973.15	2.908				
				1023.15	2.971				
				1073.15	3.054				
				1123.15	3.096				
				1173.15	3.159				
				1223.15	3.201				
				1273.15	3.264				
		-	G	298.16	1.210	0	Theor	-	5162
				300	1.217				
				400	1.606				
				500	1.945				
				600	2.224				
				700	2.455				
				800	2.647				
				900	2.809				
				1000	2.947				
				1100	3.065				
				1200	3.167				
				1300	3.254				
				1400	3.330				
				1500	3.396				
		-	G	300	1.230	1	Corr	-	2500
				400	1.599				
				500	1.925				
				600	2.209				
				700	2.451				
				800	2.652				
				900	2.811				
				1000	2.928				
ETHYL BUTYRATE	$CH_3(CH_2)_2COOCH_2CH_3$	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
				298-303	1.951				
ETHYLENEDIAMINE	$(CH_2NH_2)_2$	99.8	L	303.15	2.95	Sat.	Exper	0.4	1500
				313.15	2.97				
				323.15	3.00				
				333.15	3.03				
				343.15	3.05				
ETHYLENE OXIDE	$(CH_2)_2O$	-	G	273	1.020	0	Corr	-	1514
				291	1.070				
				298	1.096				
				300	1.102				
				400	1.401				
				500	1.713				
				600	1.959				
				700	2.164				
				800	2.337				
				900	2.484				
				1000	2.609				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ETHYLENE OXIDE (continued)	$(CH_2)_2O$	-	G	307.18 337.04 371.23	1.121 1.215 1.326	0	Cited	-	35191
		99.9	G	307.18 337.04 371.23 307.18 337.04 371.23	1.099 1.194 1.307 1.121 1.215 1.326	1	Exper	-	13243
ETHYL FORMATE	$HCOOCH_2CH_3$	-	G	410	1.58	1	Exper	±0.6	31764
		-	G	410	1.56	0	Exper	±0.6	31764
		-	G	410	1.542	1	Deriv	-	28272
3-ETHYLHEXANE	$(CH_3CH_2)_2CH(CH_2)_2CH_3$	99	G	297.1 462.7 522.7	2.151 2.384 2.618	1	Exper	1	980
ETHYL ISOVALERATE	$(CH_3)_2CHCH_2COOCH_2CH_3$	99.5	L	273.15	1.899	1	Exper	0.25	1790
3-ETHYL-2-METHYL-PENTANE	$(CH_3)_2CHCH(C_2H_5)_2$	99.0	G	399.7 461.9 522.2	2.164 2.411 2.627	1	Exper	1	980
3-ETHYL-3-METHYL-PENTANE	$(CH_3CH_2)_3CCH_3$	99.7	G	403.3 462.6 521.7	2.205 2.436 2.664	1	Exper	1	980
ETHYL PROPIONATE	$CH_3CH_2COOCH_2CH_3$	-	L	298.15 303.15 298-303	1.940 1.958 1.95	1	Cited	-	9335
		-	G	410	1.61	1	Exper	±0.6	31764
		-	G	410	1.60	0	Exper	±0.6	31764
		-	G	410 410 410	1.61 1.62 1.63	1	Deriv	-	28272
FLUORINE, MONATOMIC	F	-	G	55.55 61.11 66.67 72.21 77.78 83.32 88.88 94.43 99.99 105.55 111.10 116.66 122.21 127.77 133.32 144.43 155.55 166.66 177.77 188.88 199.99 211.10 222.21 233.32 244.43 255.55	1.095 1.095 1.097 1.098 1.101 1.104 1.107 1.111 1.116 1.121 1.126 1.131 1.136 1.141 1.146 1.156 1.165 1.173 1.180 1.185 1.190 1.193 1.196 1.198 1.199 1.200	0	Theor	-	6625

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FLUORINE, MONATOMIC (continued)	F	-	G	266.66	1.199	0	Theor	-	6625
				277.77	1.198				
				305.55	1.196				
				333.32	1.192				
				361.10	1.188				
				388.88	1.183				
				416.66	1.177				
				444.43	1.172				
				472.21	1.168				
				499.99	1.163				
				527.77	1.159				
				555.55	1.155				
				611.10	1.148				
				666.66	1.141				
				722.21	1.136				
				777.77	1.132				
				833.32	1.128				
				888.88	1.124				
				944.43	1.122				
				999.99	1.119				
				1055.55	1.117				
				1111.09	1.115				
				1166.65	1.112				
				1333.31	1.109				
				1444.42	1.107				
		-	G	55.55	1.095	0	Theor	-	20987
				61.10	1.095				
				66.66	1.097				
				72.21	1.098				
				77.77	1.101				
				83.32	1.104				
				88.88	1.107				
				94.43	1.111				
				99.99	1.116				
				105.55	1.121				
				111.10	1.126				
				116.66	1.131				
				122.21	1.136				
				127.77	1.141				
				133.32	1.146				
				144.43	1.156				
				155.55	1.165				
				166.66	1.173				
				177.77	1.180				
				188.88	1.185				
				199.99	1.190				
				211.10	1.193				
				222.21	1.196				
				233.32	1.198				
				244.43	1.199				
				255.55	1.199				
				266.66	1.199				
				277.77	1.199				
				305.55	1.196				
				333.32	1.192				
				361.10	1.188				
				388.88	1.183				
				416.66	1.177				
				444.43	1.172				
				472.21	1.168				
				499.99	1.163				
				527.77	1.159				
				555.55	1.155				
				611.10	1.148				
				666.67	1.141				
				722.21	1.136				
				777.77	1.132				
				833.32	1.128				
				888.88	1.125				
				944.43	1.122				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FLUORINE, MONATOMIC (continued)	F	-	G	999.99	1.119	0	Theor	-	20987
				1055.54	1.117				
				1111.10	1.115				
				1222.22	1.112				
				1333.32	1.109				
				1444.43	1.107				
				1555.54	1.106				
		-	G	100	1.116	0	Theor	-	33867
				200	1.190				
				298.16	1.197				
				300	1.197				
				400	1.181				
				500	1.163				
				600	1.150				
				700	1.139				
				800	1.131				
				900	1.125				
				1000	1.120				
				1100	1.116				
				1200	1.113				
				1300	1.110				
				1400	1.108				
				1500	1.107				
		-	G	100	1.116	0	Theor	-	24959
				200	1.190				
				298.15	1.197				
				300	1.197				
				400	1.181				
				500	1.163				
				600	1.149				
				700	1.138				
				800	1.130				
				900	1.124				
				1000	1.119				
				1100	1.115				
				1200	1.112				
				1300	1.110				
				1400	1.108				
				1500	1.106				
		-	G	250	1.199	0	Theor	-	401
				273.16	1.199				
				298.16	1.197				
				300	1.197				
				400	1.181				
				500	1.163				
				600	1.149				
				700	1.138				
				800	1.130				
				900	1.124				
				1000	1.119				
				1100	1.116				
				1200	1.113				
				1300	1.110				
				1400	1.108				
				1500	1.106				
		-	G	298.16	1.197	1	Theor	-	11051
				300	1.197				
				400	1.181				
				500	1.163				
				600	1.149				
				700	1.138				
				800	1.130				
				900	1.124				
				1000	1.119				
				1100	1.116				
				1200	1.112				
				1300	1.110				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FLUORINE, MONATOMIC (continued)	F	-	G	1400	1.108	1	Theor	-	11051
				1500	1.106				
FLUOROBENZENE	C_6H_5F	99.9	L	240	1.422	1	Exper	2	12139
				250	1.454				
				260	1.477				
				270	1.496				
				280	1.509				
				290	1.519				
				300	1.527				
				310	1.537				
				320	1.560				
		-	G	370	1.262	1	Exper	±0.3	33588
				390	1.317				
				410	1.369				
		-	G	370	1.245	0	Deriv		33588
				390	1.302				
				410	1.358				
		-	G	370	1.167	0	Theor	-	33588
				390	1.223				
				410	1.280				
FLUOROETHANE	CH_3CH_2F	-	G	100	0.811	0	Theor	-	47854
				200	1.017				
				298.15	1.281				
				300	1.287				
				400	1.595				
				500	1.881				
				600	2.128				
				700	2.340				
				800	2.678				
				900	2.678				
				1000	2.813				
				1100	2.930				
				1200	3.033				
				1300	3.121				
				1400	3.199				
				1500	3.265				
		-	G	235.5	1.047	0	Theor	-	32178
				298	1.222				
				400	1.537				
				600	2.058				
FLUOROETHYLENE	CH_2CHF	-	L	153.15	1.071	1	Corr	1.8	49090
				163.15	1.079				
				173.15	1.092				
				183.15	1.100				
				193.15	1.113				
				203.15	1.125				
				213.15	1.138				
				223.15	1.151				
				233.15	1.167				
				243.15	1.188				
				253.15	1.209				
				263.15	1.230				
				273.15	1.251				
				283.15	1.280				
				293.15	1.310				
		-	G	173.15	0.690	1	Corr	<1	49090
				223.15	0.816				
				273.15	0.941				
				323.15	1.067				
				373.15	1.192				
				423.15	1.318				
				473.15	1.423				
				523.15	1.506				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FLUOROETHYLENE (continued)	CH_2CHF	-	G	573.15	1.611	1	Corr	<1	49090
				623.15	1.676				
				673.15	1.682				
				723.15	1.820				
				773.15	1.883				
				823.15	1.966				
				873.15	2.008				
				923.15	2.071				
				973.15	2.113				
				1023.15	2.992				
				1073.15	3.054				
				1123.15	3.096				
				1173.15	3.138				
FLUOROFORM, MONODEUTERATED	CF_3D	-	G	100	0.478	0	Theor	-	492
				200	0.594				
				298.16	0.754				
				300	0.757				
				400	0.910				
				500	1.031				
				600	1.125				
				700	1.196				
				800	1.251				
				900	1.295				
				1000	1.329				
FLUOROMETHANE	CH_3F	-	G	200	0.994	0	Theor	-	34113
				250	1.035				
				300	1.105				
				350	1.196				
				400	1.299				
				450	1.404				
				500	1.511				
				550	1.611				
				600	1.707				
				650	1.797				
				700	1.882				
				750	1.961				
				800	2.035				
				850	2.104				
				900	2.169				
				950	2.229				
				1000	2.285				
		-	G	298.1	1.100	0	Cited	±3	3771
				350	1.195				
				400	1.297				
				500	1.506				
				600	1.700				
		-	G	298.1	1.09	1	Deriv	-	28292
				373.1	1.20				
				473.1	1.39				
		-	G	298.2	1.097	0	Theor	-	701
				400	1.288				
				500	1.494				
				600	1.689				
				700	1.861				
				800	2.011				
				900	2.142				
				1000	2.257				
FORMALDEHYDE	HCHO	-	G	273	1.154	0	Theor	-	1514
				291	1.148				
				298	1.176				
				300	1.179				
				400	1.303				
				500	1.452				
				600	1.600				
				700	1.735				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
FORMALDEHYDE (continued)	HCHO	-	G	800	1.858	0	Theor	-	1514
				900	1.967				
				1000	2.059				
				1100	2.139				
				1200	2.209				
				1300	2.269				
				1400	2.321				
				1500	2.366				
		-	G	298.15	1.240	0	Theor	-	3771
				400	1.393				
				600	1.684				
				800	1.919				
				1000	2.102				
				1200	2.243				
				1400	2.346				
				1500	2.388				
FORMYL	HCO	-	G	298.16	1.166	0	Theor	-	1702
				1000	1.607				
FURAN	C_4H_4O	-	G	44.33	1.183	1	Exper	1	15376
				67.71	1.144				
				98.99	1.248				
FURFURYL ALCOHOL	$C_4H_3OCH_2OH$	99.8	L	293.15	2.02	Sat.	Exper	±0.4	1500
				303.15	2.05				
				313.15	2.10				
				323.15	2.13				
				333.15	2.17				
				343.15	2.21				
HEXADECANE	$CH_3(CH_2)_{14}CH_3$	-	L	207.89	1.373	1	Exper	-	6539
				214.19	1.336				
				217.85	1.432				
				223.15	1.478				
				224.85	1.482				
				231.80	1.524				
				232.30	1.524				
				239.75	1.583				
				246.15	1.654				
				249.27	1.641				
				253.80	1.754				
				256.90	1.763				
				258.72	1.842				
				262.85	1.905				
				264.10	1.918				
				267.65	1.964				
				268.75	2.089				
				271.65	2.194				
				275.05	2.529				
				278.45	3.065				
				292.15	2.366				
				293.10	2.32				
				293.65	2.32				
				294.65	2.34				
		99.88	L	295.41	2.210	1	Exper	±0.1	550
				298.93	2.216				
				301.73	2.222				
				302.50	2.224				
				305.88	2.233				
				308.13	2.240				
				308.70	2.239				
				312.77	2.252				
				320.28	2.274				
				298.16	2.215				
				300	2.219				
				310	2.244				
				320	2.274				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HEXADECANE (continued)	$CH_3(CH_2)_{14}CH_3$	99.88	L	298.16	1.712	0	Theor	-	1702
				300	1.726				
				400	2.132				
				500	2.527				
				600	2.846				
				700	3.123				
				800	3.361				
				900	3.567				
				1000	3.744				
				1100	3.897				
				1200	4.032				
				1300	4.150				
				1400	4.250				
				1500	4.334				
HEXAFLUOROETHANE	$(CF_3)_2$	-	L	183.15	0.916	0	Corr	1.8	49090
				193.15	0.933				
				203.15	0.954				
				213.15	0.975				
				223.15	0.996				
				233.15	1.017				
				243.15	1.038				
				253.15	1.067				
				263.15	1.096				
				273.15	1.138				
		-	G	173.15	0.586	1	Corr	<1	49090
				223.15	0.648				
				273.15	0.732				
				323.15	0.795				
				373.15	0.879				
				423.15	0.941				
				473.15	1.004				
				523.15	1.046				
				573.15	1.088				
				623.15	1.109				
				673.15	1.151				
				723.15	1.171				
				773.15	1.192				
				823.15	1.213				
				873.15	1.222				
				923.15	1.234				
				973.15	1.243				
				1023.15	1.255				
				1073.15	1.264				
				1123.15	1.276				
				1173.15	1.284				
HEXAMETHYLBENZENE	$C_6(CH_3)_6$	-	L	457-484	2.34	1	Exper	-	1562
				457-528	2.38				
1-HEXANOL	$CH_3(CH_2)_5OH$	-	L	229.64	1.914	1	Exper	1	21812
				240.19	1.968				
				250.73	1.999				
				260.70	2.048				
				270.57	2.120				
				280.56	2.243				
				290.01	2.275				
HYDRAZINE	N_2H_4	-	G	273.15	1.57	0	Theor		1231
				291.15	1.63				
				298.15	1.66				
				373.15	1.89				
				473.15	2.15				
				573.15	2.35				
				673.15	2.51				
				773.15	2.65				
				873.15	2.78				
				973.15	2.89				
				1073.15	2.99				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDRAZINE (continued)	N_2H_4	-	G	1173.15	3.09	0	Theor	-	1231
				1273.15	3.19				
				1373.15	3.19				
				1473.15	3.32				
HYDROBROMIC ACID	HBr	-	L	190.7	0.743	Sat.	Theor	3	35181
				293.4	0.755				
				193.4	0.755				
				196.3	0.748				
				210	0.750				
		-	G	200	0.360	0	Theor	-	12399
				350	0.360				
				400	0.361				
				450	0.362				
				500	0.364				
				550	0.366				
				600	0.369				
				650	0.372				
				700	0.376				
				750	0.380				
				800	0.384				
				850	0.388				
				900	0.392				
				950	0.396				
				1000	0.400				
				1050	0.403				
				1100	0.407				
				1150	0.410				
				1200	0.413				
				1250	0.416				
				1300	0.419				
				1400	0.425				
				1500	0.429				
		-	G	273	0.360	0	Theor	-	1370
				291	0.360				
				298	0.360				
				300	0.360				
				400	0.361				
				500	0.364				
				600	0.369				
				700	0.376				
				800	0.384				
				900	0.392				
				1000	0.400				
				1100	0.407				
				1200	0.413				
				1300	0.419				
				1400	0.425				
				1500	0.430				
		-	G	600	0.369	0	Theor	-	21855
				800	0.385				
				1000	0.399				
				1200	0.411				
				1400	0.420				
HYDROCYANIC ACID	HCN	-	G	100	1.079	0	Theor	-	27459
				200	1.173				
				273.15	1.290				
				298.15	1.327				
				300	1.329				
				400	1.452				
				500	1.545				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROCYANIC ACID (continued)	HCN	-	G	600	1.622	0	Theor	-	27459
				700	1.690				
				800	1.752				
				900	1.809				
				1000	1.861				
				1100	1.908				
				1200	1.950				
				1300	1.988				
				1400	2.023				
				1500	2.053				
		-	G	100	1.079	0	Theor	-	24959
				200	1.174				
				298.15	1.327				
				300	1.329				
				400	1.451				
				500	1.544				
				600	1.621				
				700	1.689				
				800	1.751				
				900	1.807				
				1000	1.858				
				1100	1.905				
				1200	1.946				
				1300	1.984				
				1400	2.017				
				1500	2.047				
		-	G	282.84	1.500	1	Exper	-	22292
				283.37	1.582				
		-	G	298.16	1.357	0	Theor	-	1702
				300	1.359				
				400	1.424				
				500	1.480				
				600	1.534				
				700	1.585				
				800	1.636				
				900	1.683				
				1000	1.766				
				1100	1.803				
				1200	1.803				
				1300	1.836				
				1400	1.865				
				1500	1.892				
		-	G	303.15	2.184	1	Exper	1	12675
				343.15	1.579				
				383.15	1.427				
				403.15	1.423				
				420.15	1.421				
HYDROFLUORIC ACID	HF	-	G	100	1.456	0	Theor	-	33867
				200	1.455				
				298.16	1.455				
				300	1.455				
				400	1.456				
				500	1.458				
				600	1.461				
				700	1.467				
				800	1.477				
				900	1.491				
				1000	1.508				
				1100	1.527				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROFLUORIC ACID (continued)	HF	-	G	1200	1.547	0	Theor	-	33867
				1300	1.569				
				1400	1.590				
				1500	1.611				
		-	G	100	1.456	0	Theor	-	24959
				200	1.456				
				298.15	1.456				
				300	1.456				
				400	1.457				
				500	1.458				
				600	1.461				
				700	1.467				
				800	1.477				
				900	1.491				
				1000	1.508				
				1100	1.528				
				1200	1.548				
				1300	1.570				
				1400	1.591				
				1500	1.612				
		-	G	273	1.456	0	Theor	-	1370
				291	1.456				
				298	1.456				
				300	1.456				
				400	1.457				
				500	1.457				
				600	1.460				
				700	1.467				
				800	1.477				
				900	1.492				
				000	1.509				
				1100	1.528				
				1200	1.549				
				1300	1.570				
				1400	1.592				
				1500	1.613				
		-	G	298.1	1.456	0	Theor	-	11656
				300	1.456				
				400	1.457				
				500	1.457				
				600	1.461				
				800	1.477				
				1000	1.508				
				1200	1.549				
				1400	1.592				
		-	G	298.16	1.456	1	Theor	-	11051
				300	1.456				
				400	1.457				
				500	1.458				
				600	1.461				
				700	1.467				
				800	1.477				
				900	1.491				
				1000	1.508				
				1100	1.527				
				1200	1.548				
				1300	1.569				
				1400	1.590				
				1500	1.611				
HYDROFLUORIC ACID, MONODEUTERATED	DF	-	G	298.16	1.387	0	Theor	-	11051
				300	1.387				
				400	1.389				
				500	1.394				
				600	1.407				
				700	1.426				
				800	1.450				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROFLUORIC ACID, MONODEUTERATED (continued)	DF	-	G	900	1.476	0	Theor	-	11051
				1000	1.503				
				1100	1.530				
				1200	1.555				
				1300	1.578				
				1400	1.599				
				1500	1.618				
HYDROGEN, MONATOMIC	H	-	G	55.55	20.769	0	Theor	-	6625
		-	G	55-500	20.785	0	Theor	-	20987
		-	G	100-1500	20.622	0	Theor	-	24959
		-	G	298-1500	20.622	0	Deriv	-	1702
		-	G	528-1445	20.785	0	Theor	-	20987
HYDROGEN, MONO-DEUTERATED	HD	-	L	16.60	6.092	Sat.	Corr	-	15661
				17	6.272				
				18	6.756				
				19	7.199				
				20	7.601				
				21	8.016				
				22	8.432				
		-	G	0	9.65	0	Theor	-	15168
				100	9.66				
				200	9.69				
				300	9.73				
				400	9.79				
				500	9.87				
				600	9.98				
				700	10.12				
				800	10.27				
				900	10.43				
				1000	10.59				
				1100	10.74				
				1200	10.91				
				1300	11.05				
				1400	11.19				
				1500	11.31				
		-	G	10	6.881	0	Theor	-	15400
				15	6.996				
				20	7.436				
				25	8.130				
				30	8.828				
				40	9.686				
				50	9.898				
				60	9.863				
				70	9.797				
				80	9.741				
				90	9.708				
				100	9.689				
				120	9.669				
				140	9.663				
				160	9.658				
				190	9.656				
				220	9.657				
				260	9.658				
				298.1	9.661				
				300	9.661				
				400	9.671				
				500	9.689				
				600	9.726				
				700	9.791				
				800	9.890				
				1000	10.155				
				1250	10.549				
				1500	10.939				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN, MONO-DEUTERATED (continued)	HD	-	G	10	6.882	0	Theor	-	15661
				20	7.428				
				22.13	7.703				
				30	7.431				
				40	9.679				
				50	9.898				
				60	9.866				
				70	9.797				
				80	9.743				
				90	9.710				
				100	9.690				
				120	9.671				
				150	9.661				
				200	9.657				
				250	9.660				
				298.16	9.663				
				300	9.663				
				400	9.672				
				500	9.690				
				600	9.726				
				700	9.791				
				1000	10.16				
				1500	10.95				
		-	G	273.15	9.64	0	Theor	-	21010
				373.15	9.66				
				473.15	9.69				
				573.15	9.73				
				673.15	9.78				
				773.15	9.87				
				873.15	9.98				
				973.15	10.11				
				1073.15	10.27				
				1173.15	10.42				
				1273.15	10.58				
				1373.15	10.74				
				1473.15	10.90				
HYDROGEN PEROXIDE	H_2O_2	-	G	298.16	1.267	0	Theor	-	1702
				300	1.269				
				400	1.392				
				500	1.502				
				600	1.601				
				700	1.689				
				800	1.765				
				900	1.830				
				1000	1.885				
				1100	1.931				
				1200	1.967				
				1300	1.991				
				1400	2.007				
				1500	2.015				
HYDROGEN SELENIDE	H_2Se	-	L	210.43	0.838	Sat.	Exper	-	11482
				212.80	0.840				
				215.09	0.844				
				217.60	0.836				
				219.67	0.835				
				219.80	0.835				
				224.12	0.834				
				224.58	0.837				
				229.56	0.836				
				229.69	0.831				
HYDROGEN SELENIDE, DIDEUTERATED	D_2Se	-	L	210.86	0.855	Sat.	Exper	-	11482
				213.06	0.858				
				214.38	0.865				
				217.78	0.856				
				221.26	0.850				
				221.43	0.859				
				224.56	0.858				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN SELENIDE, DIDEUTERATED (continued)	D_2Se	-	L	225.49	0.857	Sat.	Exper	-	11482
				227.76	0.847				
				229.17	0.855				
				232.69	0.857				
HYDROGEN SULFIDE, DIDEUTERATED	D_2S	-	L	188.76	1.954	Sat.	Exper	-	11482
				189.34	1.962				
				192.02	1.959				
				193.11	1.976				
				193.42	1.947				
				196.66	1.951				
				197.07	1.967				
				199.88	1.953				
				202.52	1.954				
		-	G	50	0.922	0	Theor	-	3973
				60	0.922				
				70	0.922				
				80	0.922				
				90	0.922				
				100	0.922				
				110	0.923				
				120	0.923				
				130	0.924				
				140	0.925				
				150	0.927				
				160	0.929				
				170	0.931				
				180	0.934				
				190	0.937				
				200	0.941				
				210	0.945				
				220	0.950				
				230	0.954				
				240	0.959				
				250	0.964				
				260	0.970				
				270	0.975				
				280	0.981				
				290	0.987				
				300	0.993				
				310	0.999				
				320	1.005				
				330	1.011				
				340	1.017				
				350	1.024				
				360	1.030				
				370	1.037				
				380	1.043				
				390	1.050				
				400	1.057				
				450	1.091				
				500	1.127				
				550	1.162				
				600	1.197				
				650	1.230				
				700	1.261				
				750	1.291				
				800	1.319				
				850	1.345				
				900	1.369				
				950	1.391				
				1000	1.411				
				1050	1.430				
				1100	1.447				
				1150	1.463				
				1200	1.478				
				1300	1.505				
				1400	1.528				
				1500	1.548				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN SULFIDE, DITRITIATED	T_2S	-	G	50	0.873	0	Theor	-	3973
				60	0.873				
				70	0.873				
				80	0.874				
				90	0.874				
				100	0.874				
				110	0.875				
				120	0.877				
				130	0.879				
				140	0.881				
				150	0.885				
				160	0.888				
				170	0.893				
				180	0.898				
				190	0.903				
				200	0.908				
				210	0.914				
				220	0.920				
				230	0.927				
				240	0.933				
				250	0.940				
HYDROGEN SULFIDE, MONODEUTERATED	HDS	-	G	50	0.948	0	Theor	-	3973
				80	0.948				
				90	0.949				
				130	0.949				
				140	0.950				
				150	0.950				
				160	0.951				
				170	0.952				
				180	0.953				
				190	0.955				
				200	0.957				
				210	0.959				
				220	0.961				
				230	0.964				
				240	0.967				
				250	0.971				
				260	0.974				
				270	0.978				
				280	0.982				
				290	0.986				
				300	0.991				
				310	0.996				
				320	1.000				
				330	1.005				
				340	1.010				
				350	1.015				
				360	1.026				
				370	1.027				
				380	1.031				
				390	1.037				
				400	1.042				
				450	1.071				
				500	1.101				
				550	1.130				
				600	1.160				
				650	1.189				
				700	1.217				
				750	1.244				
				800	1.270				
				850	1.295				
				900	1.318				
				950	1.339				
				1000	1.360				
				1050	1.379				
				1100	1.396				
				1150	1.413				
				1200	1.428				
				1300	1.456				
				1400	1.479				
				1500	1.500				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN SULFIDE, MONODEUTERATED MONOTRITIATED	DTS	-	G	50	0.897	0	Theor	-	3973
				60	0.897				
				70	0.897				
				80	0.897				
				90	0.897				
				100	0.898				
				110	0.898				
				120	0.899				
				130	0.900				
				140	0.902				
				150	0.904				
				160	0.907				
				170	0.910				
				180	0.913				
				190	0.917				
				200	0.922				
				210	0.927				
				220	0.932				
				230	0.937				
				240	0.943				
				250	0.949				
HYDROGEN SULFIDE, MONOTRITIATED	HTS	-	G	50	0.922	0	Theor	-	3973
				60	0.922				
				70	0.922				
				80	0.922				
				90	0.922				
				100	0.922				
				110	0.922				
				120	0.923				
				130	0.923				
				140	0.924				
				150	0.924				
				160	0.925				
				170	0.927				
				180	0.928				
				190	0.930				
				200	0.933				
				210	0.935				
				220	0.939				
				230	0.942				
				240	0.946				
				250	0.950				
				260	0.955				
				270	0.968				
				280	0.965				
				290	0.970				
				300	0.976				
				310	0.981				
				320	0.987				
				330	0.993				
				340	0.999				
				350	1.006				
				360	1.012				
				370	1.018				
				380	1.025				
				390	1.031				
				400	1.038				
				450	1.071				
				500	1.104				
				550	1.135				
				600	1.166				
				650	1.195				
				700	1.222				
				750	1.248				
				800	1.272				
				850	1.291				
				900	1.316				
				950	1.335				
				1000	1.354				
				1050	1.371				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
HYDROGEN SULFIDE, MONOTRITIATED (continued)	HTS	-	G	1100	1.386	0	Theor	-	3973
				1150	1.401				
				1200	1.415				
				1300	1.439				
				1400	1.460				
				1500	1.478				
HYDROQUINONE	$C_6H_4(OH)_2$	-	L	445.45	2.348	1	Exper	-	21796
HYDROXYACETANILIDE	$CH_3CONHC_6H_4OH$	-	L	364.45	1.96	1	Exper	-	21796
HYDROXYL	OH	-	G	0	1.76	0	Theor	-	15168
				100	1.74				
				200	1.73				
				300	1.73				
				400	1.74				
				500	1.75				
				600	1.77				
				700	1.80				
				800	1.83				
				900	1.85				
				1000	1.88				
				1100	1.91				
				1200	1.93				
				1300	1.96				
				1400	1.98				
				1500	2.00				
		-	G	273.15	1.76	0	Theor	-	21010
				373.15	1.74				
				473.15	1.73				
				573.15	1.73				
				673.15	1.74				
				773.15	1.75				
				873.15	1.77				
				973.15	1.80				
				1073.15	1.83				
				1173.15	1.85				
				1273.15	1.88				
				1373.15	1.91				
				1473.15	1.93				
		-	G	298.16	1.757	0	Theor	-	1702
				400	1.740				
				600	1.735				
				800	1.759				
				1000	1.804				
				1200	1.858				
				1400	1.912				
		-	G	300	1.756	0	Theor	-	15418
				400	1.740				
				500	1.734				
				600	1.736				
				700	1.743				
				800	1.761				
				900	1.780				
				1000	1.805				
				1250	1.873				
				1500	1.939				
IODINE	I_2	-	G	250	0.144	0	Theor	-	401
				273.16	0.145				
				300	0.145				
				400	0.147				
				500	0.148				
				700	0.148				
				800	0.149				
				1000	0.149				
				1100	0.150				
				1500	0.151				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
IODINE (continued)	I_2	-	G	273	0.145	0	Theor	-	1370
				300	0.145				
				400	0.147				
				500	0.147				
				600	0.148				
				700	0.148				
				800	0.149				
				1100	0.149				
				1200	0.150				
				1500	0.150				
IODINE, MONATOMIC	I	-	G	55.55	0.164	0	Theor	-	20987
				1333.32	0.164				
				1444.43	0.165				
				1555.54	0.165				
		-	G	250	0.164	0	Theor	-	401
				1300	0.164				
				1400	0.165				
				1500	0.165				
		-	G	555.55	0.164	0	Theor	-	6625
				1444.42	0.165				
IODINE BROMIDE	IBr	-	G	250	0.174	0	Theor	-	401
				273.16	0.176				
				300	0.176				
				400	0.179				
				500	0.180				
				600	0.181				
				700	0.181				
				800	0.182				
				900	0.182				
				1000	0.183				
				1300	0.183				
				1400	0.184				
				1500	0.184				
IODINE CHLORIDE	ICl	-	G	250	0.215	0	Theor	-	401
				273.16	0.217				
				298.16	0.219				
				300	0.219				
				400	0.224				
				500	0.227				
				600	0.229				
				700	0.230				
				800	0.231				
				900	0.231				
				1000	0.232				
				1100	0.232				
				1200	0.233				
				1400	0.233				
				1500	0.234				
IODINE FLUORIDE	IF	-	G	250	0.223	0	Theor	-	401
				273.16	0.226				
				298.16	0.229				
				300	0.230				
				400	0.239				
				500	0.245				
				600	0.249				
				700	0.252				
				800	0.254				
				900	0.255				
				1000	0.256				
				1100	0.257				
				1200	0.258				
				1300	0.258				
				1400	0.259				
				1500	0.260				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
IODINE HEPTAFLUORIDE	IF_7	-	G	250	0.468	0	Theor	-	401
				273.16	0.496				
				298.16	0.520				
				300	0.522				
				400	0.588				
				500	0.625				
				600	0.647				
				700	0.662				
				800	0.671				
				900	0.678				
				1000	0.683				
IODINE PENTAFLUORIDE	IF_5	-	G	250	0.408	0	Theor	-	401
				273.16	0.427				
				298.16	0.447				
				300	0.448				
				400	0.501				
				500	0.531				
				600	0.550				
				700	0.562				
				800	0.570				
				900	0.576				
				1000	0.580				
				1100	0.584				
				1200	0.586				
				1300	0.588				
				1400	0.590				
				1500	0.591				
IODOBENZENE	C_6H_5I	99.9	L	250	0.759	1	Exper	2	12139
				260	0.765				
				270	0.770				
				280	0.772				
				290	0.776				
				300	0.778				
				310	0.779				
				320	0.788				
IODOMETHANE	CH_3I	-	L	240	0.578	1	Exper	0.5	1353
				243.4	0.575				
				245.2	0.576				
				250	0.574				
				254.2	0.575				
				260	0.572				
				260.4	0.573				
				270	0.572				
				274.5	0.567				
				280	0.574				
				284.3	0.572				
				290	0.577				
				294.3	0.579				
				300	0.582				
				303.2	0.588				
		-	L	253-287	0.87	1	Exper	-	731
				220-290	0.85				
				222-292	0.85				
				217-294	0.85				
				291-308	0.90				
		-	G	298.1	0.311	0	Theor	-	3771
				350	0.384				
				400	0.364				
				500	0.410				
				600	0.451				
1-IODO-3-METHYL-BUTANE	$(CH_3)_2CH(CH_2)_2I$	-	L	286-327	0.94	1	Exper	-	731
				290-372	0.98				
				289-410	1.02				
ISOBUTYL ACETATE	$CH_3COOCH_2CH(CH_3)_2$	-	G	410	1.675	1	Exper	0.6	31764
		-	G	410	1.661	0	Exper	0.6	31764

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ISOPENTYL ACETATE	$CH_3COO(CH_2)_2CH(CH_3)_2$	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
				298-303	1.95				
ISOPRENE	$CH_2C(CH_3)CHCH_2$	-	L	243.15	2.059	1	Corr	1.8	45861
				248.15	2.075				
				253.15	2.088				
				258.15	2.100				
				263.15	2.117				
				268.15	2.130				
				273.15	2.146				
				278.15	2.163				
				283.15	2.184				
				288.15	2.201				
				293.15	2.222				
				298.15	2.243				
				303.15	2.259				
				308.15	2.280				
				313.15	2.301				
				318.15	2.318				
				323.15	2.335				
				328.15	2.360				
				333.15	2.381				
				343.15	2.427				
		-	G	273	1.425	0	Theor	-	1283
				291	1.505				
				298	1.536				
				300	1.548				
				400	1.953				
				500	2.279				
				600	2.543				
				700	2.764				
				800	2.949				
				900	3.108				
				1000	3.250				
				1100	3.373				
				1200	3.477				
				1300	3.575				
				1400	3.655				
				1500	3.723				
		-	G	273.15	1.381	1	Corr	0.5	45861
				323.15	1.569				
				373.15	1.736				
				423.15	1.925				
				473.15	2.092				
				523.15	2.259				
				573.15	2.385				
				623.15	2.510				
				673.15	2.636				
				723.15	2.741				
				773.15	2.824				
				823.15	2.929				
				873.15	3.033				
				923.15	3.096				
				973.15	3.180				
				1023.15	3.264				
				1073.15	3.305				
				1123.15	3.389				
				1173.15	3.431				
				1223.15	3.494				
				1273.15	3.535				
		-	G	300	1.377	1	Corr	-	2500
				400	1.437				
				500	2.075				
				600	2.369				
				700	2.626				
				800	2.846				
				900	3.031				
				1000	3.178				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
ISOPROPYLAMINE	$(CH_3)_2CHNH_2$	99.8	L	303.15	2.73	Sat.	Exper	0.4	1500
				313.15	2.77				
				323.15	2.82				
				333.15	2.86				
				343.15	2.90				
				353.15	2.94				
KETENE	H_2CCO	-	G	250	1.031	0	Theor	-	1220
				273.16	1.081				
				291.16	1.119				
				298.16	1.134				
				300	1.138				
				400	1.334				
				500	1.497				
				600	1.630				
				700	1.744				
				800	1.839				
				900	1.922				
				1000	1.994				
				1100	2.056				
				1200	2.111				
				1300	2.158				
				1400	2.199				
				1500	2.235				
		-	G	273	1.088	0	Theor	-	1514
				291	1.124				
				298	1.138				
				300	1.191				
				400	1.336				
				500	1.498				
				600	1.631				
				700	1.744				
				800	1.839				
				900	1.922				
				1000	1.993				
				1100	2.056				
				1200	2.110				
				1300	2.158				
				1400	2.198				
				1500	2.234				
MESITYLENE	$C_6H_3(CH_3)_3$	-	L	290-329	1.82	1	Exper	-	1562
				287-365	1.86				
				290-365	1.88				
				291-395	1.95				
				290-428	1.99				
		99.9978	L	294.26	1.650	Sat.	Exper	1	1278
				299.82	1.676				
				305.37	1.702				
				310.93	1.727				
				316.49	1.753				
				322.04	1.779				
				327.59	1.805				
				333.15	1.831				
				338.15	1.857				
				344.26	1.884				
				349.82	1.910				
				355.37	1.936				
				360.93	1.962				
				366.48	1.989				
				372.04	2.015				
				377.59	2.042				
		-	G	298.16	1.241	0	Theor	-	33589
				400	1.612				
				500	1.945				
				600	2.231				
				800	2.678				
				1000	2.999				
				1500	3.482				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
MESITYLENE (continued)	$C_6H_3(CH_3)_3$	-	G	300 400 500 600 800 1000	1.248 1.612 1.939 2.226 2.685 2.990	1	Deriv	-	2500
METHANE, DIDEUTERATED	CH_2D_2	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.842 1.856 2.085 2.391 3.093 3.732 4.747	0	Theor	-	20459
METHANE, DIDEUTERATED DITRITIATED	CD_2T_2	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.506 1.549 1.924 2.220 2.930 3.459 4.186	0	Theor	-	20459
METHANE, DITRITIATED	CH_2T_2	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.657 1.682 1.951 2.213 2.930 3.506 4.373	0	Theor	-	20459
METHANE, MONODEUTERATED	CH_3D	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.951 1.958 2.145 2.380 3.124 3.784 4.893	0	Theor	-	20459
METHANE, MONODEUTERATED TRITRITIATED	CDT_3	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.440 1.494 1.889 2.186 2.880 3.385 4.054	0	Theor	-	20459
METHANE, MONOTRITIATED	CH_3T	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.842 1.851 2.053 2.294 3.021 3.649 4.671	0	Theor	-	20459
METHANE, TETRADEUTERATED	CD_4	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.657 1.686 2.017 2.316 3.068 3.660 4.510	0	Theor	-	20459
METHANE, TETRATRITIATED	CT_4	-	G	93.15 173.15 298.15 373.15 573.15 773.15 1273.15	1.380 1.444 1.861 2.156 2.831 3.310 3.928	0	Theor	-	20459

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
METHANE, TRIDEUTERATED	CHD_3	-	G	93.15	1.745	0	Theor	-	20459
				173.15	1.764				
				298.15	2.045				
				373.15	2.322				
				573.15	3.076				
				773.15	3.691				
				1273.15	4.621				
METHANE, TRIDEUTERATED MONOTRITIATED	CD_3T	-	G	93.15	1.578	0	Theor	-	20459
				173.15	1.613				
				298.15	1.965				
				373.15	2.260				
				573.15	2.995				
				773.15	3.554				
				1273.15	4.342				
METHANE, TRITRITIATED	CHT_3	-	G	93.15	1.506	0	Theor	-	20459
				173.15	1.549				
				298.15	1.890				
				373.15	2.169				
				573.15	2.870				
				773.15	3.398				
				1273.15	4.129				
METHANETHIOL	CH_3SH	-	G	298.16	1.054	0	Theor	-	948
				400	1.226				
				500	1.387				
				600	1.531				
				700	1.659				
				800	1.772				
				900	1.872				
				1000	1.961				
METHYL	CH_3	-	G	298.16	2.288	0	Theor	-	1702
				1000	3.828				
METHYL ACETATE	CH_3COOCH_3	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
		-	G	410	1.55	1	Exper	0.6	31764
		-	G	410	1.54	0	Exper	0.6	31764
		-	G	410	1.54	0	Deriv	·	28272
METHYLAMINE	CH_3NH_2	-	G	273.15	1.584	0	Theor	-	1231
				291.15	1.642				
				298.15	1.665				
				373.15	1.920				
				473.15	2.247				
				573.15	2.538				
				673.15	2.794				
				773.15	3.021				
				873.15	3.224				
				973.15	3.404				
				1073.15	3.562				
				1173.15	3.702				
				1273.15	3.824				
				1373.15	3.933				
				1473.15	4.029				
2-METHYLBUTANE	$(CH_3)_2CHCH_2CH_3$	-	L	120.5	1.711	1	Exper	<1	31769
				125.3	1.728				
				140.3	1.761				
				169.5	1.828				
				186.1	1.870				
				200.6	1.916				
				215.8	1.958				
				230.5	2.008				
				245.3	2.059				
				260.5	2.121				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYLBUTANE (continued)	$(CH_3)_2CHCH_2CH_3$	-	L	275.0	2.171	1	Exper	<1	31769
				275.2	2.167				
				275.7	2.171				
				275.8	2.180				
		-	L	199.82	1.820	1	Corr	-	19092
				227.59	1.946				
				255.37	2.071				
				283.15	2.197				
				310.93	2.343				
				338.71	2.489				
				366.48	2.636				
				394.26	2.803				
				422.04	2.971				
				449.82	3.138				
				477.59	3.305				
		-	L	243.15	2.092	1	Corr	1.8	45861
				248.15	2.109				
				253.15	2.117				
				258.15	2.134				
				263.15	2.146				
				268.15	2.163				
				273.15	2.180				
				278.15	2.201				
				283.15	2.218				
				288.15	2.234				
				293.15	2.259				
				298.15	2.276				
				303.15	2.297				
				308.15	2.322				
				313.15	2.343				
				318.15	2.360				
				323.15	2.385				
				328.15	2.406				
				333.15	2.431				
				343.15	2.485				
		-	G	273.15	1.548	1	Corr	0.5	45861
				323.15	1.778				
				373.15	2.008				
				423.15	2.238				
				473.15	2.427				
				523.15	2.615				
				573.15	2.803				
				623.15	2.971				
				673.15	3.138				
				723.15	3.284				
				773.15	3.410				
				823.15	3.556				
				873.15	3.682				
				923.15	3.807				
				973.15	3.891				
				1023.15	3.975				
				1073.15	4.038				
				1123.15	4.100				
				1173.15	4.163				
		-	G	298.16	1.672	0	Theor	-	20085
				300	1.680				
				400	2.149				
				500	2.565				
				600	2.916				
				700	3.213				
				800	3.468				
				900	3.688				
				1000	3.880				
				1100	4.048				
				1200	4.192				
				1300	4.319				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYLBUTANE (continued)	$(CH_3)_2CHCH_2CH_3$	-	G	1400 1500	4.429 4.524	0	Theor	-	20085
		81	G	454	2.348	1	Theor	2	1384
2-METHYL-2-BUTANOL	$(CH_3)_2COHCH_2CH_3$	95	L	273.15	2.609	1	Exper	0.25	1790
		99.8	G	381.35 384.65 387.45 396.05 398.05 425.95 475.25 520.85 576.05	2.146 2.036 1.993 2.004 2.027 2.133 2.285 2.420 2.713	1	Exper	±0.3	57382
3-METHYL-1-BUTANOL	$(CH_3)_2CH(CH_2)_2OH$	-	L	273.15	2.208	1	Exper	-	1790
		-	L	293.15 303.15	2.29 2.38	1	Exper	-	21778
		-	L	298.15 298.15 303.15 303.15	2.318 2.379 2.384 2.436	1	Deriv	-	9335
		-	L	295-399	2.92	1	Exper	0.3	17524
		99.8	G	451.65 474.55 488.35 499.15	2.174 2.223 2.281 2.338	1	Exper	0.3	57382
2-METHYL-2-BUTENE	$CH_3C(CH_3)CHCH_3$	-	L	143.9 152.8 173.4 183.8 201.4 203.4 213.7 231.5 233.5 253.5 263.4 275.4 283.4 289.0 293.9	1.874 1.874 1.879 1.891 1.920 1.929 1.950 1.971 1.979 2.029 2.054 2.084 2.113 2.125 2.142	1	Exper	<1	31768
3-METHYL-1-BUTYNE	$(CH_3)_2CHCCH$	-	G	298.16 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500	1.537 1.544 1.910 2.224 2.494 2.715 2.912 3.078 3.219 3.348 3.458 3.551 3.637 3.710	0	Theor	-	4525
METHYL CYANIDE	CH_3CN	-	G	273.15 298.15 373.15 473.15 573.15 673.15	1.216 1.272 1.439 1.650 1.827 2.000	0	Theor	-	3771

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
METHYL CYANIDE (continued)	CH_3CN	-	G	773.15	2.144	0	Theor	-	3771
		-	G	291.16	1.259	0	Theor	-	8059
				298.16	1.273				
				300	1.277				
				350	1.388				
				400	1.498				
				450	1.603				
				500	1.703				
				550	1.802				
				600	1.883				
				650	1.964				
				700	2.038				
				800	2.171				
				900	2.293				
				1000	2.405				
				1100	2.497				
				1200	2.568				
METHYLCYCLOHEXANE	$C_6H_{11}CH_3$	-	L	151.4	1.418	1	Exper	<1	31768
				157.1	1.435				
				170.3	1.469				
				182.6	1.502				
				199.4	1.540				
				214.3	1.582				
				229.4	1.628				
				244.9	1.674				
				260.0	1.724				
				275.4	1.782				
				285.2	1.824				
				294.2	1.854				
		-	G	390	1.862	1	Exper	0.3	33588
				410	1.945				
		-	G	390	1.841	0	Deriv	-	33588
				410	1.926				
		-	G	390	1.807	0	Theor	-	33588
				410	1.896				
		-	G	407.15	1.889	1	Exper	-	28289
		-	G	410	1.896	1	Exper	0.6	31764
		-	G	410	1.879	0	Exper	0.6	31764
		-	G	410	1.913	1	Deriv	-	28272
METHYLCYCLOPENTANE	$C_5H_9CH_3$	-	L	139.0	1.473	1	Exper	0.05	33584
				169.5	1.494				
				189.2	1.527				
				210.3	1.573				
				230.0	1.623				
				251.3	1.690				
				275.1	1.774				
				293.7	1.870				
		99	L	299.82	1.891	Sat.	Exper	-	974
				305.37	1.916				
				310.93	1.942				
				316.48	1.969				
				322.04	1.995				
				327.59	2.022				
				333.15	2.049				
				338.71	2.077				
				344.26	2.105				
				349.82	2.134				
				355.37	2.162				
				360.93	2.192				
				366.48	2.221				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
METHYLENE	CH_2	-	G	298.16	2.355	0	Theor	-	1702
				1000	3.030				
METHYL ETHER	$(CH_3)_2O$	-	L	153.15	2.113	1	Corr	2	52325
				173.15	2.134				
				193.15	2.155				
				213.15	2.176				
				233.15	2.218				
				253.15	2.280				
				273.15	2.343				
				293.15	2.469				
		-	G	272.20	1.346	1	Cited	-	35191
				300.76	1.430				
				333.25	1.527				
				370.42	1.631				
		99.95	G	272.20	1.319	1	Exper	-	13243
				300.76	1.407				
				333.25	1.507				
				370.42	1.614				
		-	G	273.15	1.360	1	Corr	1	52325
				323.15	1.506				
				373.15	1.653				
				423.15	1.799				
				473.15	1.946				
				523.15	2.092				
				573.15	2.218				
				623.15	2.343				
				673.15	2.469				
				723.15	2.573				
				773.15	2.678				
				823.15	2.782				
				873.15	2.866				
				923.15	2.971				
				973.15	3.033				
				1023.15	3.117				
				1073.15	3.180				
				1123.15	3.222				
				1173.15	3.284				
				1223.15	3.347				
				1273.15	3.410				
		-	G	298.15	1.38	1	Exper	-	14727
				370.25	1.53				
2-METHYLFURAN	$C_4H_3OCH_3$	-	L	190	1.571	1	Exper	-	20068
				200	1.576				
				210	1.583				
				220	1.594				
				230	1.607				
				240	1.622				
				250	1.640				
				260	1.660				
				270	1.681				
				273.15	1.688				
				280	1.705				
				290	1.729				
				298.15	1.751				
				300	1.756				
2-METHYLHEPTANE	$(CH_3)_2CH(CH_2)_4CH_3$	-	L	283.15	2.144	Sat.	Exper	0.1	1781
				288.15	2.163				
				293.15	2.183				
				298.15	2.202				
				303.15	2.221				
				308.15	2.241				
		-	L	299.82	2.085	Sat.	Exper	±3	1824
				305.37	2.108				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYLHEPTANE (continued)	$(CH_3)_2CH(CH_2)_4CH_3$	-	L	310.93	2.133	Sat.	Exper	±3	1824
				316.48	2.157				
				322.04	2.182				
				327.59	2.208				
				333.15	2.233				
				338.71	2.259				
				344.26	2.286				
				349.82	2.313				
				355.55	2.338				
				360.93	2.366				
				366.48	2.394				
3-METHYLHEPTANE	$CH_3CH_2CH(CH_3)(CH_2)_3CH_3$	-	L	283.15	2.128	Sat.	Exper	0.1	1781
				288.15	2.147				
				293.15	2.166				
				298.15	2.185				
				303.15	2.205				
				308.15	2.226				
4-METHYLHEPTANE	$[CH_3(CH_2)_2]_2CH(CH_3)$	-	L	278.15	2.111	Sat.	Exper	0.1	1781
				283.15	2.133				
				288.15	2.154				
				293.15	2.176				
				298.15	2.198				
				303.15	2.219				
				308.15	2.241				
				313.15	2.264				
				318.15	2.286				
2-METHYLHEXANE	$(CH_3)_2CH(CH_2)_3CH_3$	-	L	160.2	1.787	Sat.	Exper	1	31769
				166.0	1.799				
				180.3	1.837				
				195.2	1.879				
				211.0	1.925				
				225.0	1.962				
				240.3	2.008				
				255.4	2.054				
				275.8	2.121				
				280.6	2.163				
				286.2	2.171				
				292.4	2.188				
METHYLHYDRAZINE	CH_3NHNH_2	-	G	298.16	1.54	0	Theor	-	1702
				300	1.55				
				400	1.91				
				500	2.21				
				600	2.46				
				700	2.66				
				800	2.84				
				900	3.01				
				1000	3.14				
				1200	3.37				
				1500	3.61				
METHYLIDYNE	CH	-	G	298.16	2.235	0	Theor	-	1702
				1000	2.419				
METHYL ISOCYANIDE	CH_3NC	-	G	273.15	1.252	0	Theor	-	3771
				298.15	1.301				
				373.15	1.453				
				473.15	1.651				
				573.15	1.840				
				673.15	2.001				
				773.15	2.144				
2-METHYLPENTANE	$(CH_3)_2CH(CH_2)_2CH_3$	99.971	L	120	1.706	1	Exper	0.2	8669
				130	1.724				
				140	1.743				
				150	1.762				
				160	1.783				
				170	1.805				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYLPENTANE (continued)	$(CH_3)_2CH(CH_2)_2CH_3$	99.971	L	180	1.829	1	Exper	0.2	8669
				190	1.854				
				200	1.881				
				210	1.910				
				220	1.941				
				230	1.975				
				240	2.010				
				250	2.047				
				260	2.086				
				270	2.127				
				280	2.168				
				290	2.212				
				300	2.256				
		99.95	L	120	1.674	1	Exper	2	12139
				130	1.713				
				140	1.751				
				150	1.793				
				160	1.776				
				170	1.858				
				180	1.895				
				190	1.929				
				200	1.963				
				210	1.999				
				220	2.032				
				230	2.065				
				240	2.101				
				250	2.136				
				260	2.171				
				270	2.205				
				280	2.243				
				290	2.276				
				300	2.309				
				310	2.349				
				320	2.423				
		-	G	298.16	1.673	0	Theor	-	20085
				300	1.681				
				400	2.136				
				500	2.549				
				600	2.894				
				700	3.190				
				800	3.438				
				900	3.656				
				1000	3.846				
3-METHYLPENTANE	$[CH_3CH_2)_2CH(CH_3)$	-	L	100	1.667	1	Exper	0.2	8669
				110	1.678				
				120	1.694				
				130	1.712				
				140	1.731				
				150	1.751				
				160	1.771				
				170	1.792				
				180	1.815				
				190	1.839				
				200	1.865				
				210	1.892				
				220	1.921				
				230	1.952				
				240	1.986				
				250	2.021				
				260	2.057				
				270	2.096				
				280	2.136				
				290	2.179				
				300	2.222				
		99.95	L	120	1.729	1	Exper	2	12139
				130	1.769				
				140	1.805				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
3-METHYLPENTANE (continued)	$[CH_3CH_2]_2CH(CH_3)$	99.95	L	150	1.837	1	Exper	2	12139
				160	1.865				
				170	1.894				
				180	1.917				
				190	1.942				
				200	1.964				
				210	1.985				
				220	2.005				
				230	2.024				
				240	2.043				
				250	2.060				
				260	2.079				
				270	2.103				
				280	2.119				
				290	2.142				
				300	2.182				
				310	2.243				
				320	2.348				
		-	G	298.16	1.706	0	Theor	-	20085
				300	1.714				
				400	2.166				
				500	2.569				
				600	2.908				
				700	3.200				
				800	3.447				
				900	3.661				
				1000	3.850				
4-METHYL-2-PENTANONE	$CH_3COCH_2CH(CH_3)_2$	-	L	193.15	1.757	1	Corr	2-5	51360
				203.15	1.766				
				213.15	1.774				
				223.15	1.782				
				233.15	1.795				
				243.15	1.807				
				253.15	1.824				
				263.15	1.841				
				273.15	1.862				
				283.15	1.879				
				293.15	1.900				
				303.15	1.920				
				313.15	1.941				
				323.15	1.966				
				333.15	1.996				
				343.15	2.025				
				353.15	2.054				
				363.15	2.084				
				373.15	2.117				
				383.15	2.151				
				393.15	2.188				
		-	G	273.15	1.423	1	Corr	1	51360
				323.15	1.590				
				373.15	1.757				
				423.15	1.925				
				473.15	2.071				
				523.15	2.218				
				573.15	2.343				
				623.15	2.469				
				673.15	2.594				
				723.15	2.699				
				773.15	2.803				
				823.15	2.887				
				873.15	2.992				
				923.15	3.054				
				973.15	3.138				
				1023.15	3.201				
				1073.15	3.284				
				1123.15	3.326				
				1173.15	3.368				
				1223.15	3.421				
				1273.15	3.473				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYL-1-PROPANOL	$(CH_3)_2CHCH_2OH$	-	L	278.34	2.227	1	Exper	0.5	4671
				296.35	2.475				
				319.01	2.761				
		-	L	293.15	2.43	1	Exper	-	21778
				303.15	2.52				
		-	L	295-372	2.90	1	Exper	0.3	17524
				295-379	2.95				
		-	L	298.15	2.438	1	Deriv	-	9335
				303.15	2.494				
		-	G	383	2.115	1	Exper	0.1	525
				394	1.995				
				405	1.994				
				417	2.017				
				428	2.041				
				437	2.067				
		99.8	G	390.55	1.988	1	Exper	±0.3	57382
				397.65	1.968				
				406.95	1.975				
				416.95	1.982				
				424.05	2.003				
				441.85	2.053				
				451.25	2.093				
				474.35	2.171				
				477.75	2.177				
				501.55	2.243				
				525.85	2.330				
				546.35	2.393				
				583.95	2.488				
				602.55	2.564				
		-	G	410	1.68	1	Exper	0.6	31764
		-	G	410	1.87	0	Exper	0.6	31764
		-	G	410	1.812	1	Deriv	-	28272
				410	1.846				
2-METHYL-2-PROPANOL	$(CH_3)_3COH$	-	G	359	2.321	1	Exper	0.1	525
				363	2.161				
				373	2.045				
				383	2.012				
				394	2.014				
				405	2.028				
				417	2.059				
				428	2.091				
				437	2.115				
		99.8	G	360.55	2.116	1	Exper	±0.3	57382
				372.85	2.028				
				385.65	2.002				
				410.85	2.031				
				439.85	2.121				
				441.45	2.125				
				470.75	2.225				
				499.25	2.298				
				528.75	2.402				
				575.05	2.564				
				591.55	2.633				
		-	G	407.15	0.886	1	Deriv	-	14170
2-METHYLPROPENE	$(CH_3)_2CCH_2$	-	L	243.15	2.100	1	Corr	1.8	45861
				248.15	2.117				
				253.15	2.138				
				258.15	2.155				
				263.15	2.176				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-METHYLPROPENE (continued)	$(CH_3)_2CCH_2$	-	L	268.15	2.192	1	Corr	1.8	45861
				273.15	2.213				
				278.15	2.238				
				283.15	2.259				
				288.15	2.280				
				293.15	2.305				
				298.15	2.326				
				303.15	2.351				
				308.15	2.377				
				313.15	2.406				
				318.15	2.435				
				323.15	2.473				
				328.15	2.506				
				333.15	2.540				
				343.15	2.611				
		-	G	273	1.486	0	Theor	-	28505
				291	1.560				
				298	1.589				
				300	1.595				
				400	1.982				
				500	2.330				
				600	2.633				
				700	2.894				
				800	3.122				
				900	3.321				
				1000	3.494				
				1100	3.646				
				1200	3.776				
				1300	3.891				
				1400	3.991				
				1500	4.078				
		-	G	273.15	1.485	1	Corr	0.5	45861
				323.15	1.569				
				373.15	1.683				
				423.15	2.071				
				473.15	2.259				
				523.15	2.448				
				573.15	2.615				
				623.15	2.741				
				673.15	2.866				
				723.15	2.992				
				773.15	3.096				
				823.15	3.201				
				873.15	3.305				
				923.15	3.410				
				973.15	3.494				
				1023.15	3.598				
				1073.15	3.661				
				1123.15	3.724				
				1173.15	3.807				
				1223.15	3.870				
				1273.15	3.933				
		-	G	298.16	1.589	0	Theor	-	198
				300	1.595				
				400	1.982				
				500	2.330				
				600	2.633				
				700	2.894				
				800	3.122				
				900	3.321				
				1000	3.494				
				1100	3.646				
				1200	3.776				
				1300	3.891				
				1400	3.991				
				1500	4.078				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
METHYL SULFIDE	$(CH_3)_2S$	-	G	298.16	1.155	0	Theor	-	948
				400	1.371				
				500	1.570				
				600	1.758				
				700	1.925				
				800	2.071				
				900	2.199				
				1000	2.315				
NAPHTHALENE	$C_{10}H_8$	-	L	353.13	1.714	1	Exper	-	21796
1-NAPHTHOL	$C_{10}H_7OH$	-	L	368.15	1.93	1	Exper	-	21796
2-NAPHTHOL	$C_{10}H_7OH$	-	L	393.75	2.00	1	Exper	-	21796
m-NITROANILINE	$O_2NC_6H_4NH_2$	-	L	384.95	1.91	1	Exper	-	21796
o-NITROANILINE	$O_2NC_6H_4NH_2$	-	L	342.45	1.80	1	Exper	-	21796
p-NITROANILINE	$O_2NC_6H_4NH_2$	-	L	420.65	2.00	1	Exper	-	21796
NITROBENZENE	$C_6H_5NO_2$	-	L	278.97	1.427	1	Exper	-	4306
				280.50	1.431				
				281.76	1.435				
				283.54	1.439				
				285.56	1.443				
				287.49	1.448				
				289.47	1.452				
				290.75	1.456				
				291.39	1.460				
				293.42	1.464				
		-	L	293.15	1.421	1	Cited	-	9335
				295.15	1.423				
				293.15	1.477				
				298.15	1.431				
				298.15	1.445				
				298.15	1.485				
		-	L	293.15	1.43	1	Exper	-	21778
				303.15	1.44				
		-	L	293.15	1.42	1	Exper	-	21776
				303.15	1.44				
				313.15	1.46				
				323.15	1.48				
m-NITROBENZOIC ACID	$C_6H_4(NO_2)COOH$	-	L	414.25	2.035	1	Exper	-	21796
o-NITROBENZOIC ACID	$C_6H_4(NO_2)COOH$	-	L	418.95	1.677	1	Exper	-	21796
p-NITROBENZOIC ACID	$C_6H_4(NO_2)COOH$	-	L	512.35	1.878	1	Exper	-	21796
NITROGEN, MONATOMIC	N		G	55.55	1.484	0	Theor	-	6625
				1444.42	1.484				
		-	G	55.55	1.485	0	Theor	-	20987
				1444.43	1.485				
		-	G	100	1.484	0	Theor	-	24959
				1500	1.484				
		-	G	298.16	1.484	0	Theor	-	1702
				1400	1.484				
NITROMETHANE	CH_3NO_2	-	L	298.15	1.649	1	Cited	-	9335
				303.15	1.651				
		99.8	L	303.15	1.766	Sat.	Exper	0.4	1500
				313.15	1.782				
				323.15	1.795				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
NITROMETHANE (continued)	CH_3NO_2	99.8	L	333.15	1.807	Sat.	Exper	0.4	1500
				343.15	1.824				
				353.15	1.841				
				363.15	1.858				
				373.15	1.874				
2-OCTYL ACETATE	$CH_3COOCHCH_3(CH_2)_5CH_3$	-	L	298.15	1.940	1	Cited	-	9335
				303.15	1.958				
OXYGEN, MONATOMIC	O	-	G	55.55	1.394	0	Theor	-	6625
				61.11	1.414				
				66.67	1.431				
				72.21	1.462				
				77.78	1.458				
				83.32	1.468				
				88.88	1.474				
				94.43	1.479				
				99.99	1.481				
				105.55	1.482				
				111.10	1.482				
				116.66	1.481				
				122.21	1.478				
				127.77	1.475				
				133.32	1.472				
				144.43	1.464				
				155.55	1.455				
				166.66	1.446				
				177.77	1.438				
				188.88	1.429				
				199.99	1.421				
				211.10	1.413				
				222.21	1.406				
				233.32	1.399				
				244.43	1.393				
				255.55	1.387				
				266.66	1.382				
				277.77	1.377				
				305.55	1.367				
				333.32	1.358				
				361.10	1.351				
				388.88	1.345				
				416.66	1.340				
				444.43	1.335				
				472.21	1.332				
				499.99	1.328				
				527.77	1.326				
				555.55	1.323				
				611.10	1.319				
				666.66	1.316				
				722.21	1.314				
				777.77	1.312				
				833.32	1.310				
				888.88	1.309				
				944.43	1.308				
				999.99	1.307				
				1055.55	1.306				
				1111.09	1.306				
				1166.65	1.304				
				1333.31	1.304				
				1444.42	1.303				
				1555.54	1.302				
		-	G	55.55	1.394	0	Theor	-	20987
				61.10	1.414				
				66.66	1.431				
				72.21	1.446				
				83.32	1.468				
				88.88	1.474				
				94.43	1.479				
				99.99	1.481				
				105.55	1.482				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
OXYGEN, MONATOMIC (continued)	O	-	G	111.10	1.482	0	Theor	-	20987
				116.66	1.481				
				122.21	1.478				
				127.77	1.475				
				133.32	1.472				
				144.43	1.464				
				155.55	1.455				
				166.66	1.446				
				177.77	1.438				
				188.88	1.429				
				199.99	1.429				
				211.10	1.413				
				222.21	1.396				
				233.32	1.399				
				244.43	1.393				
				255.55	1.388				
				266.66	1.382				
				277.77	1.377				
				305.55	1.367				
				333.32	1.358				
				361.10	1.351				
				388.88	1.345				
				416.66	1.339				
				444.43	1.335				
				472.21	1.332				
				499.99	1.328				
				527.77	1.326				
				555.55	1.323				
				611.10	1.319				
				666.67	1.316				
				722.21	1.314				
				777.77	1.312				
				833.32	1.310				
				888.88	1.309				
				944.43	1.308				
				999.99	1.307				
				1055.54	1.306				
				1111.10	1.306				
				1222.22	1.305				
				1333.32	1.304				
				1444.43	1.303				
		-	G	100	1.482	0	Theor	-	24959
				200	1.421				
				298.15	1.369				
				300	1.369				
				400	1.343				
				500	1.329				
				600	1.320				
				700	1.315				
				800	1.311				
				900	1.309				
				1000	1.307				
				1100	1.306				
				1200	1.305				
				1300	1.304				
				1400	1.303				
				1500	1.303				
		-	G	298.16	1.369	0	Theor	-	1702
				400	1.343				
				600	1.320				
				800	1.311				
				1000	1.307				
				1200	1.305				
				1400	1.303				
OXYGEN FLUORIDE	OF_2	-	G	250	0.755	0	Theor	-	401
				273.16	0.779				
				298.16	0.802				
				300	0.804				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
OXYGEN FLUORIDE (continued)	OF_2	-	G	400	0.882	0	Theor	-	401
				500	0.934				
				600	0.971				
				700	0.995				
				800	1.013				
				900	1.025				
				1000	1.034				
				1100	1.041				
				1200	1.047				
				1300	1.051				
				1400	1.054				
				1500	1.058				
PENTADECANE	$CH_3(CH_2)_{13}CH_3$	99.95	L	280	2.931	1	Exper	0.1	550
				285.51	2.190				
				289.76	2.196				
				290	2.196				
				291.62	2.200				
				296.09	2.208				
				298.16	2.212				
				298.47	2.213				
				300	2.217				
				304.48	2.227				
				310	2.242				
				312.78	2.250				
1-PENTANOL	$CH_3(CH_2)_4OH$	95	L	273.15	2.180	1	Exper	0.25	1790
		-	G	417	2.123	1	Exper	0.1	525
				428	2.085				
				437	2.101				
		99.8	G	418.95	2.123	1	Exper	±0.3	57382
				420.75	2.102				
				426.15	2.077				
				433.45	2.090				
				442.85	2.145				
				444.35	2.143				
				472.85	2.206				
				482.25	2.218				
				531.25	2.397				
				554.15	2.436				
				573.95	2.523				
3-PENTANOL	$CH_3CH_2CHOHCH_2CH_3$	-	L	273.15	2.744	1	Exper	-	1790
3-PENTANONE	$(C_2H_5)_2CO$	-	L	233.15	2.017	1	Corr	2-5	51360
				243.15	2.033				
				253.15	2.050				
				263.15	2.075				
				273.15	2.092				
				283.15	2.117				
				293.15	2.146				
				303.15	2.176				
				313.15	2.201				
				323.15	2.234				
				333.15	2.259				
				343.15	2.293				
				353.15	2.326				
				363.15	2.360				
				373.15	2.397				
				383.15	2.435				
				393.15	2.477				
		-	G	273.15	1.402	1	Corr	1	51360
				323.15	1.548				
				373.15	1.715				
				423.15	1.862				
				473.15	2.008				
				523.15	2.134				
				573.15	2.280				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
3-PENTANONE (continued)	$(C_2H_5)_2CO$	-	G	623.15	2.406	1	Corr	1	51360
				673.15	2.510				
				723.15	2.615				
				773.15	2.720				
				823.15	2.803				
				873.15	2.908				
				923.15	2.992				
				973.15	3.054				
				1023.15	3.117				
				1073.15	3.180				
				1123.15	3.243				
				1173.15	3.305				
				1223.15	3.347				
				1273.15	3.389				
1-PENTENE	$CH_2CH(CH_2)_2CH_3$	-	G	300	1.450	1	Corr	-	2500
				400	1.881				
				500	2.248				
				600	2.584				
				700	2.879				
				800	3.130				
				900	3.341				
				1000	3.509				
2-PENTENE	$CH_3CHCHCH_2CH_3$	-	L	136.1	1.824	1	Exper	<1	31768
				152.8	1.837				
				169.0	1.854				
				201.2	1.916				
				230.8	1.983				
				260.5	2.059				
				275.1	2.109				
				289.1	2.155				
1-PENTYNE	$HCCCH_2CH_2CH_3$	-	G	298.16	1.566	0	Theor	-	4525
				300	1.576				
				400	1.910				
				500	2.218				
				600	2.482				
				700	2.703				
				800	2.893				
				900	3.059				
				1000	3.207				
				1100	3.336				
				1200	3.446				
				1300	3.545				
				1400	3.630				
				1500	3.698				
2-PENTYNE	$CH_3CCCH_2CH_3$	-	G	298.16	1.407	0	Theor	-	4525
				300	1.413				
				400	1.742				
				500	2.046				
				600	2.309				
				700	2.542				
				800	2.738				
				900	2.917				
				1000	3.067				
				1100	3.198				
				1200	3.317				
				1300	3.413				
				1400	3.502				
				1500	3.574				
PHENYL ETHER	$(C_6H_5)_2O$	99.999	L	300.03	1.577	Sat.	Exper	0.1-0.2	1699
				310	1.602				
				320	1.628				
				330	1.655				
				340	1.682				
				350	1.708				
				360	1.735				
				370	1.762				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PHENYL ETHER (continued)	$(C_6H_5)_2O$	99.999	L	380	1.788	Sat.	Exper	0.1-0.2	1699
				390	1.815				
				400	1.841				
				410	1.868				
				420	1.894				
				430	1.920				
				440	1.946				
				450	1.973				
				460	1.999				
				470	2.025				
				480	2.051				
				490	2.078				
				500	2.104				
				510	2.130				
				520	2.156				
				530	2.182				
				540	2.208				
				550	2.234				
				560	2.260				
				570	2.286				
PHOSGENE	$COCl_2$	-	G	100	0.369	0	Theor	-	24959
				200	0.490				
				298.15	0.584				
				300	0.585				
				400	0.647				
				500	0.688				
				600	0.718				
				700	0.741				
				800	0.758				
				900	0.772				
				1000	0.782				
				1100	0.791				
				1200	0.797				
				1300	0.803				
				1400	0.808				
				1500	0.811				
		-	G	273	0.597	0	Theor	-	1360
				291	0.609				
				298	0.614				
				300	0.615				
				400	0.667				
				500	0.702				
				600	0.729				
				700	0.749				
				800	0.766				
				900	0.779				
				1000	0.786				
		-	G	298.1	0.538	0	Theor	-	3771
				400	0.589				
				600	0.648				
				800	0.683				
				900	0.694				
PHOSPHINE	PH_3	-	G	100	0.978	0	Theor	-	24959
				200	0.998				
				298.15	1.091				
				300	1.094				
				400	1.229				
				500	1.367				
				600	1.497				
				700	1.616				
				800	1.721				
				900	1.812				
				1000	1.891				
				1100	1.959				
				1200	2.016				
				1300	2.064				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PHOSPHINE (continued)	PH_3	-	G	1400	2.106	0	Theor	-	24959
				1500	2.142				
		-	G	298.2	1.092	0	Theor	-	9770
				300	1.094				
				400	1.229				
				500	1.367				
				600	1.498				
				700	1.616				
				800	1.722				
				900	1.813				
				1000	1.891				
PHOSPHINE, TRIDEUTERATED	PD_3	-	G	298.2	1.144	0	Theor	-	9770
				300	1.147				
				400	1.319				
				500	1.473				
				600	1.604				
				700	1.712				
				800	1.799				
				900	1.869				
				1000	1.926				
PHOSPHORUS TRICHLORIDE	PCl_3	-	G	100	0.338	0	Theor	-	24959
				200	0.460				
				298.15	0.523				
				300	0.524				
				400	0.555				
				500	0.571				
				600	0.581				
				700	0.587				
				800	0.591				
				900	0.594				
				1000	0.596				
				1100	0.598				
				1200	0.599				
				1300	0.600				
				1400	0.601				
				1500	0.601				
PHOSPHORUS TRIFLUORIDE	PF_3	-	G	100	0.416	0	Theor	-	24959
				200	0.553				
				298.15	0.667				
				300	0.669				
				400	0.751				
				500	0.805				
				600	0.841				
				700	0.865				
				800	0.882				
				900	0.894				
				1000	0.903				
				1100	0.910				
				1200	0.915				
				1300	0.920				
				1400	0.923				
				1500	0.926				
PROPADIENE	$C(CH_2)_2$	-	G	148.1	1.014	0	Exper	-	11104
				148.3	1.014				
				157.6	1.033				
				157.6	1.036				
				158.0	1.036				
				158.0	1.038				
				212.3	1.190				
				213.9	1.183				
				218.1	1.213				
				218.6	1.199				
				223.4	1.227				
				223.9	1.324				
				256.4	1.333				
				258.3	1.320				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PROPADIENE (continued)	$C(CH_2)_2$	-	G	258.4	1.340	0	Exper	-	11104
				259.0	1.331				
		-	G	148.1	1.014	0	Exper	-	3771
				148.3	1.014				
				157.6	1.033				
				157.6	1.036				
				158.0	1.036				
				158.0	1.038				
				212.3	1.190				
				213.9	1.183				
				218.1	1.213				
				218.6	1.199				
				223.4	1.227				
				223.9	1.220				
				256.4	1.333				
				258.3	1.320				
				258.4	1.340				
				259.0	1.331				
		-	G	272.16	1.379	1	Exper	0.4	13244
				272.16	1.386				
				272.16	1.416				
				300.00	1.479				
				300.00	1.481				
				300.00	1.506				
				334.00	1.591				
				334.00	1.593				
				334.00	1.609				
				366.45	1.694				
				366.45	1.695				
				366.45	1.707				
		-	G	272.16	1.379	0	Corr	-	35191
				272.16	1.386				
				300.00	1.479				
				300.00	1.481				
				334.00	1.591				
				334.00	1.593				
				336.45	1.694				
				366.45	1.695				
		-	G	273	1.385	0	Theor	-	1283
				291	1.448				
				298	1.473				
				300	1.479				
				400	1.797				
				500	2.070				
				600	2.298				
				700	2.490				
				800	2.655				
				900	2.799				
				1000	2.924				
				1100	3.033				
				1200	3.129				
				1300	3.212				
				1400	3.285				
				1500	3.348				
		-	G	300	1.397	1	Deriv	-	2500
				400	1.686				
				500	1.949				
				600	2.188				
				700	2.400				
				800	2.587				
				900	2.749				
				1000	2.886				
1,2-PROPANEDIOL	$CH_3CHOHCH_2OH$	-	L	253.15	2.238	1	Corr	-	52070
				263.15	2.301				
				273.15	2.364				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1,2-PROPANEDIOL (continued)	$CH_3CHOHCH_2OH$	-	L	283.15	2.406	1	Corr	-	52070
				293.15	2.469				
				303.15	2.531				
				313.15	2.594				
				323.15	2.657				
				333.15	2.699				
				343.15	2.761				
				353.15	2.824				
				363.15	2.887				
				373.15	2.950				
				383.15	2.992				
				393.15	3.054				
				403.15	3.117				
				413.15	3.180				
				423.15	3.243				
				433.15	3.305				
				443.15	3.347				
				453.15	3.410				
		-	G	273.15	1.548	1	Corr	-	52070
				298.15	1.619				
				323.15	1.695				
				348.15	1.757				
				373.15	1.841				
				398.15	1.904				
				423.15	1.966				
				448.15	2.029				
				473.15	2.084				
				498.15	2.146				
				523.15	2.197				
				548.15	2.247				
				573.15	2.289				
				598.15	2.343				
				623.15	2.385				
				648.15	2.427				
				673.15	2.469				
				698.15	2.510				
				723.15	2.552				
				748.15	2.594				
				773.15	2.636				
1-PROPANOL	$CH_3(CH_2)_2OH$	-	L	152.1	1.778	1	Exper	1	21798
				152.6	1.778				
				185.6	1.824				
				194.1	1.849				
				199.0	1.858				
				275.0	2.221				
				275.0	2.221				
		-	L	162.8	1.77	1	Exper	-	18985
				168.0	1.81				
				170	1.807				
				170.7	1.77				
				176.0	1.86				
				180	1.879				
				182.0	1.86				
				190	1.925				
				192.3	1.94				
				192.3	1.95				
				196.8	1.96				
				200	1.962				
				202.5	1.97				
				207.6	1.98				
				209.6	1.99				
				210	1.991				
				215.5	2.01				
				220	2.025				
				222.5	2.07				
				222.9	2.06				
				226.5	2.03				
				228.6	2.07				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1-PROPANOL (continued)	$CH_3(CH_2)_2OH$	-	L	230	2.063	1	Exper	-	18985
				230.7	2.05				
				231.7	2.09				
				233.6	2.08				
				234.3	2.11				
				236.9	2.05				
				237.1	2.09				
				240	2.100				
				243.3	2.13				
				244.7	2.11				
				246.4	2.13				
				248.3	2.12				
				250	2.142				
				250.7	2.12				
				254.5	2.16				
				257.3	2.18				
				259.2	2.19				
				260	2.197				
				266.0	2.23				
				268.3	2.31				
				269.8	2.30				
				270	2.264				
				270.5	2.26				
				274.4	2.28				
		-	L	170	1.81	1	Exper	-	22395
				180	1.88				
				190	1.92				
				200	1.96				
				210	1.99				
				220	2.03				
				230	2.06				
				240	2.10				
				250	2.14				
				260	2.20				
				270	2.26				
		-	L	279.66	2.272	1	Exper	0.5	4671
				290.76	2.353				
				297.57	2.419				
				304.06	2.490				
				318.83	2.711				
		-	L	298.15	2.385	1	Cited	-	9335
				298.15	2.428				
				303.15	2.418				
				303.15	2.502				
		99.9	L	303	2.333	1	Exper	±0.4	1237
				313	2.447				
				323	2.572				
				333	2.702				
				343	2.835				
				353	2.969				
				363	3.103				
				373	3.245				
				383	3.392				
				393	3.542				
		-	G	273.16	1.377	0	Theor	-	1288
				291.16	1.455				
				298.16	1.485				
				300	1.495				
				400	1.909				
				500	2.256				
				600	2.534				
				700	2.766				
				800	2.963				
				900	3.131				
				1000	3.280				
				1100	3.408				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
1-PROPANOL (continued)	$CH_3(CH_2)_2OH$	-	G	1200	3.524	0	Theor	-	1288
				1300	3.619				
				1400	3.703				
				1500	3.779				
		-	G	373	2.115	1	Exper	0.1	525
				383	1.922				
				394	1.905				
				405	1.913				
				417	1.931				
				428	1.961				
				437	1.980				
		99.9	G	375.45	2.100	1	Exper	±0.3	57382
				383.05	1.929				
				387.15	1.917				
				396.95	1.901				
				409.95	1.914				
				420.75	1.9285				
				422.95	1.9292				
				437.95	1.963				
				461.05	2.025				
				475.35	2.089				
				504.35	2.159				
				511.85	2.179				
				532.35	2.247				
				560.05	2.327				
				578.85	2.389				
				603.25	2.453				
		-	G	407.15	1.714	1	Exper	-	14170
				410.15	1.873				
		-	G	407.15	1.83	1	Exper	-	28289
		-	G	410	1.838	1	Exper	±0.6	31764
		-	G	410	1.824	0	Exper	±0.6	31764
2-PROPANOL	$(CH_3)_2CHOH$	99.95	L	188.45	1.798	1	Exper	1	21816
				193.02	1.814				
				202.32	1.843				
				212.82	1.870				
				224.07	1.919				
				235.26	1.971				
				246.54	2.059				
				258.40	2.136				
				274.48	2.233				
				280.26	2.345				
				286.76	2.401				
				292.84	2.492				
		-	L	195.4	1.85	1	Exper	-	21788
				198.5	1.87				
				199.1	1.87				
				227.0	1.97				
				275.3	2.33				
				284.0	2.42				
				287.6	2.45				
				290.2	2.49				
				293.1	2.54				
		-	L	293.15	2.702	1	Exper	-	21778
				303.15	2.830				
		-	L	294-354	3.00	1	Exper	0.3	17524
		-	L	298.15	2.720	1	Exper	-	11120
		-	L	298.15	2.572	1	Corr	-	9335
				298.15	2.745				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2-PROPANOL (continued)	$(CH_3)_2CHOH$	-	L	303.15	2.647	1	Corr	-	9335
				303.15	2.831				
		-	G	273.16	1.427	0	Theor	-	1288
				291.16	1.498				
				298.16	1.525				
				300	1.532				
				400	1.915				
				500	2.250				
				600	2.527				
				700	2.761				
				800	2.959				
				900	3.133				
				1000	3.282				
				1100	3.413				
				1200	3.523				
				1300	3.627				
				1400	3.714				
				1500	3.789				
		-	G	359	2.322	1	Exper	0.1	525
				363	2.081				
				373	1.987				
				383	1.943				
				394	1.936				
				405	1.954				
				417	1.982				
				428	2.007				
				437	2.027				
		99.8	G	365.75	2.077	1	Exper	±0.3	57382
				378.85	1.967				
				384.95	1.949				
				393.65	1.927				
				405.35	1.943				
				431.15	1.990				
				453.15	2.051				
				466.75	2.085				
				480.55	2.124				
				499.75	2.183				
				513.95	2.219				
				539.05	2.307				
				567.05	2.398				
				597.25	2.474				
		-	G	370.25	0.619	1	Exper	-	14170
				370.25	0.620				
				407.15	0.591				
				407.15	0.592				
				410.15	1.852				
		-	G	407.15	1.631	1	Exper	-	28289
		-	G	410	1.845	1	Exper	±0.6	31764
		-	G	410	1.831	0	Exper	±0.6	31764
PROPYL ACETATE	$CH_3COO(CH_2)_2CH_3$	-	L	298.15	1.940	1	Corr	-	9335
				298.15	1.902				
				303.15	1.958				
				303.15	1.928				
PROPYLBENZENE	$C_6H_5(CH_2)_2CH_3$	-	L	273.15	1.707	1	Corr	±2.1	56305
				283.15	1.741				
				293.15	1.770				
				303.15	1.799				
				313.15	1.828				
				323.15	1.858				
				333.15	1.887				
				343.15	1.916				
				353.15	1.941				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PROPYLBENZENE (continued)	$C_6H_5(CH_2)_2CH_3$	-	L	363.15	1.975	1	Corr	±2.1	56305
				373.15	2.004				
				383.15	2.033				
				393.15	2.063				
				403.15	2.092				
				413.15	2.117				
				423.15	2.151				
				433.15	2.176				
				443.15	2.209				
				453.15	2.234				
				463.15	2.259				
				473.15	2.293				
		-	G	273.15	1.151	1	Corr	-	56305
				323.15	1.360				
				373.15	1.548				
				423.15	1.757				
				473.15	1.925				
				523.15	2.071				
				573.15	2.218				
				623.15	2.343				
				673.15	2.469				
				723.15	2.573				
				773.15	2.657				
				823.15	2.761				
				873.15	2.845				
				923.15	2.929				
				973.15	3.012				
				1023.15	3.075				
				1073.15	3.138				
				1123.15	3.201				
				1173.15	3.243				
				1223.15	3.284				
				1273.15	3.326				
		-	G	298.16	1.279	0	Theor	-	5162
				300	1.288				
				400	1.671				
				500	2.012				
				600	2.298				
				700	2.531				
				800	2.726				
				900	2.893				
				1000	3.032				
				1100	3.154				
				1200	3.258				
				1300	3.349				
				1400	3.429				
				1500	3.495				
		-	G	300	1.175	1	Cited	-	2500
				400	1.565				
				500	1.912				
				600	2.216				
				700	2.475				
				800	2.692				
				900	2.864				
				1000	2.994				
PROPYL ETHER	$[CH_3(CH_2)_2]_2O$	-	L	193.15	2.008	1	Corr	2	52325
				213.15	2.029				
				233.15	2.071				
				253.15	2.092				
				273.15	2.134				
				293.15	2.176				
				413.15	2.218				
				433.15	2.280				
				453.15	2.364				
				473.15	2.448				
				493.15	2.552				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PROPYL ETHER (continued)	$[CH_3(CH_2)_2]_2O$	-	G	273.15	1.464	1	Corr	1	52325
				323.15	1.653				
				373.15	1.820				
				423.15	2.008				
				473.15	2.176				
				523.15	2.343				
				573.15	2.469				
				623.15	2.573				
				673.15	2.678				
				723.15	2.782				
				773.15	2.887				
				823.15	2.971				
				873.15	3.054				
				923.15	3.117				
				973.15	3.180				
				1023.15	3.222				
				1073.15	3.243				
				1103.15	3.264				
				1173.15	3.284				
				1223.15	3.305				
				1273.15	3.326				
PROPYNE	CH_3CCH	-	G	157.6	1.076	0	Theor	-	3771
				218.1	1.269				
				258.4	1.395				
		-	G	272.28	1.437	1	Exper	0.4	13244
				299.59	1.523				
				332.83	1.625				
				369.21	1.725				
		-	G	272.28	1.437	0	Cited	-	35191
				272.28	1.438				
				299.59	1.523				
				332.83	1.624				
				332.83	1.625				
				369.21	1.725				
				369.21	1.730				
		-	G	273	1.017	0	Theor	-	1283
				291	1.491				
				298	1.514				
				300	1.520				
				400	1.810				
				500	2.062				
				600	2.277				
				700	2.463				
				800	2.626				
				900	2.769				
				1000	2.894				
				1100	3.005				
				1200	3.101				
				1300	3.186				
				1400	3.260				
				1500	3.325				
		-	G	294.3	1.507	0	Exper	-	3771
				306.2	1.545				
				329.4	1.614				
				338.9	1.641				
		-	G	298.16	1.514	0	Theor	-	4525
				300	1.520				
				400	1.810				
				500	2.062				
				600	2.277				
				700	2.463				
				800	2.626				
				900	2.769				
				1000	2.894				
				1100	3.005				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
PROPYNE (continued)	CH_3CCH	-	G	1200	3.101	0	Theor	-	4525
				1300	3.186				
				1400	3.260				
				1500	3.325				
		-	G	300	1.503	1	Cited	-	2500
				400	1.791				
				500	2.049				
				600	2.277				
				700	2.474				
				800	2.641				
				900	2.779				
				1000	2.887				
PYRIDINE	C_5H_5N	-	L	295-369	1.86	1	Exper	±0.4	17523
				295-402	1.89				
PYROCATECHOL	$C_6H_4(OH)_2$	-	L	377.45	2.174	1	Exper	-	21796
RESORCINOL	$C_6H_4(OH)_2$	-	[illegible]	382.85	2.185	1	Exper	-	21796
SILANE	SiH_4	-	G	100	1.034	0	Theor	-	591
				200	1.102				
				298.16	1.334				
				300	1.338				
				400	1.342				
				500	1.842				
				600	2.052				
				700	2.234				
				800	2.389				
				900	2.523				
				1000	2.633				
		-	G	100	1.036	0	Theor	-	12098
				200	1.106				
				298.16	1.334				
				300	1.338				
				400	1.602				
				500	1.842				
				600	2.052				
				700	2.234				
				800	2.389				
				900	2.522				
				1000	2.633				
		-	G	100	1.036	0	Theor	-	24959
				200	1.106				
				298.15	1.333				
				300	1.338				
				400	1.602				
				500	1.842				
				600	2.052				
				700	2.234				
				800	2.389				
				900	2.521				
				1000	2.632				
				1100	2.725				
				1200	2.804				
				1300	2.870				
				1400	2.926				
				1500	2.973				
SILICON TETRA-CHLORIDE	$SiCl_4$	-	L	208.8	0.830	1	Exper	±2	33583
				294.3	0.854				
		-	L	298.15	0.840	1	Exper	-	33587
		-	G	100	0.336	0	Theor	-	591
				200	0.464				
				298.16	0.533				
				300	0.534				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SILICON TETRA-CHLORIDE (continued)	$SiCl_4$	-	G	400	0.571	0	Theor	-	591
				500	0.591				
				600	0.604				
				700	0.612				
				800	0.617				
				900	0.621				
				1000	0.624				
		-	G	100	0.336	0	Theor	-	12098
				200	0.464				
				298.16	0.533				
				300	0.534				
				400	0.571				
				500	0.591				
				600	0.604				
				700	0.612				
				800	0.617				
				900	0.621				
				1000	0.624				
		-	G	100	0.336	0	Theor	-	24959
				200	0.464				
				298.15	0.536				
				300	0.534				
				400	0.571				
				500	0.592				
				600	0.604				
				700	0.612				
				800	0.617				
				900	0.621				
				1000	0.624				
				1100	0.626				
				1200	0.628				
				1300	0.629				
				1400	0.630				
				1500	0.631				
SILICON TETRA-FLUORIDE	SiF_4	-	G	100	0.400	0	Theor	-	24959
				200	0.583				
				298.15	0.706				
				300	0.708				
				400	0.798				
				500	0.860				
				600	0.903				
				700	0.933				
				800	0.955				
				900	0.971				
				1000	0.982				
				1100	0.991				
				1200	0.998				
				1300	1.004				
				1400	1.009				
				1500	1.012				
STYRENE	$C_6H_5CHCH_2$	-	G	273	1.074	0	Theor	-	28506
				291	1.144				
				298	1.172				
				300	1.179				
				400	1.540				
				500	1.846				
				600	2.095				
				700	2.299				
				800	2.467				
				900	2.609				
				1000	2.729				
				1100	2.832				
				1200	2.919				
				1300	2.995				
				1400	3.060				
				1500	3.116				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR, DIATOMIC	S_2	-	G	273	0.499	0	Theor	-	1344
				291	0.504				
				298	0.506				
				300	0.506				
				400	0.530				
				500	0.546				
				600	0.557				
				700	0.564				
				800	0.569				
				900	0.573				
				1000	0.576				
				1100	0.578				
				1200	0.580				
				1300	0.581				
				1400	0.582				
				1500	0.583				
		-	G	298.16	0.506	0	Theor	-	450
				300	0.507				
				400	0.531				
				500	0.547				
				600	0.557				
				700	0.564				
				800	0.570				
				900	0.574				
				1000	0.577				
				1100	0.579				
				1200	0.581				
				1300	0.582				
				1400	0.583				
				1500	0.585				
		-	G	298.16	0.505	0	Theor	-	1702
				300	0.506				
				400	0.530				
				500	0.545				
				600	0.555				
				700	0.562				
				800	0.566				
				900	0.570				
				1000	0.572				
				1100	0.575				
				1200	0.575				
				1300	0.577				
				1400	0.577				
				1500	0.578				
SULFUR, MONATOMIC	S	-	G	55.55	0.649	0	Theor	-	6625
				61.11	0.649				
				66.67	0.650				
				72.21	0.652				
				77.78	0.654				
				83.32	0.656				
				88.88	0.659				
				94.43	0.662				
				99.99	0.666				
				105.55	0.670				
				111.10	0.674				
				116.66	0.678				
				122.21	0.682				
				127.77	0.687				
				133.32	0.691				
				144.43	0.699				
				155.55	0.707				
				166.66	0.714				
				177.77	0.720				
				188.88	0.725				
				199.99	0.729				
				211.10	0.733				
				222.21	0.735				
				233.32	0.737				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR, MONATOMIC (continued)	S	-	G	244.43	0.738	0	Theor	-	6625
				255.55	0.739				
				266.66	0.739				
				277.77	0.739				
				305.55	0.738				
				333.32	0.735				
				361.10	0.731				
				388.88	0.726				
				416.66	0.722				
				444.43	0.718				
				472.21	0.713				
				499.99	0.709				
				527.77	0.705				
				555.55	0.702				
				611.10	0.695				
				666.66	0.690				
				722.21	0.685				
				777.77	0.681				
				833.32	0.678				
				888.88	0.675				
				944.43	0.672				
				999.99	0.670				
				1055.55	0.668				
				1111.09	0.667				
				1166.65	0.664				
				1333.31	0.662				
				1444.42	0.661				
		-	G	55.55	0.650	0	Theor	-	20987
				61.10	0.651				
				66.66	0.652				
				72.21	0.653				
				77.77	0.655				
				83.32	0.657				
				88.88	0.660				
				94.43	0.664				
				99.99	0.667				
				105.55	0.671				
				111.10	0.671				
				116.66	0.679				
				122.21	0.684				
				127.77	0.688				
				133.32	0.692				
				144.43	0.700				
				155.55	0.708				
				166.66	0.715				
				177.77	0.721				
				188.88	0.726				
				199.99	0.731				
				211.10	0.734				
				222.21	0.737				
				233.32	0.739				
				244.43	0.740				
				255.55	0.741				
				266.66	0.741				
				277.77	0.741				
				305.55	0.739				
				333.32	0.736				
				361.10	0.732				
				388.88	0.728				
				416.66	0.723				
				444.43	0.719				
				472.21	0.715				
				499.99	0.711				
				527.77	0.707				
				555.55	0.703				
				611.10	0.697				
				666.67	0.691				
				722.21	0.687				
				777.77	0.683				
				833.32	0.680				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR, MONATOMIC (continued)	S	-	G	888.88	0.676	0	Theor	-	20987
				944.43	0.674				
				999.99	0.672				
				1055.54	0.670				
				1111.10	0.668				
				1222.22	0.665				
				1333.32	0.664				
				1444.43	0.662				
		-	G	100	0.666	0	Theor	-	24959
				200	0.729				
				298.15	0.738				
				300	0.738				
				400	0.725				
				500	0.709				
				600	0.697				
				700	0.687				
				800	0.680				
				900	0.674				
				1000	0.670				
				1100	0.667				
				1200	0.664				
				1300	0.663				
				1400	0.661				
				1500	0.661				
SULFUR DICHLORIDE	SCl_2	-	G	100	0.368	0	Theor	-	24959
				200	0.445				
				298.15	0.494				
				300	0.495				
				400	0.521				
				500	0.535				
				600	0.544				
				700	0.549				
				800	0.553				
				900	0.555				
				1000	0.557				
				1100	0.558				
				1200	0.559				
				1300	0.560				
				1400	0.561				
				1500	0.561				
SULFUR DIFLUORIDE	SF_2	-	G	100	0.478	0	Theor	-	24959
				200	0.539				
				298.15	0.622				
				300	0.624				
				400	0.686				
				500	0.727				
				600	0.754				
				700	0.772				
				800	0.785				
				900	0.794				
				1000	0.800				
				1100	0.805				
				1200	0.809				
				1300	0.812				
				1400	0.815				
				1500	0.817				
SULFUR HEXAFLUORIDE	SF_6	99.6	L	225	0.759	Sat.	Exper	-	35182
				230	0.818				
		-	G	100	0.266	0	Theor	-	24959
				200	0.473				
				298.15	0.666				
				300	0.669				
				400	0.799				
				500	0.881				
				600	0.933				
				700	0.968				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR HEXAFLUORIDE (continued)	SF_6	-	G	800	0.993	0	Theor	-	24959
				900	1.010				
				1000	1.023				
				1100	1.032				
				1200	1.040				
				1300	1.046				
				1400	1.051				
				1500	1.055				
SULFUR MONOCHLORIDE	S_2Cl_2	-	G	100	0.362	0	Theor	-	24959
				200	0.480				
				298.15	0.540				
				300	0.540				
				400	0.569				
				500	0.585				
				600	0.594				
				700	0.599				
				800	0.603				
				900	0.605				
				1000	0.607				
				1100	0.609				
				1200	0.610				
				1300	0.611				
				1400	0.611				
				1500	0.612				
SULFUR MONOXIDE	SO	-	G	298.16	0.629	0	Theor	-	450
				300	0.630				
				400	0.659				
				500	0.685				
				600	0.706				
				700	0.722				
				800	0.733				
				900	0.742				
				1000	0.749				
				1100	0.754				
				1200	0.758				
				1300	0.762				
				1400	0.765				
				1500	0.768				
SULFUR TETRA-FLUORIDE	SF_4	-	G	100	0.366	0	Theor	-	24959
				200	0.525				
				298.15	0.638				
				300	0.640				
				400	0.781				
				500	0.845				
				600	0.885				
				700	0.913				
				800	0.931				
				900	0.945				
				1000	0.955				
				1100	0.962				
				1200	0.968				
				1300	0.973				
				1400	0.976				
				1500	0.979				
SULFUR TRIOXIDE	SO_3	-	G	100	0.426	0	Theor	-	24959
				200	0.529				
				298.15	0.633				
				300	0.634				
				400	0.720				
				500	0.788				
				600	0.840				
				700	0.879				
				800	0.909				
				900	0.931				
				1000	0.949				
				1100	0.963				
				1200	0.973				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFUR TRIOXIDE (continued)	SO_3	-	G	1300	0.982	0	Theor	-	24959
				1400	0.989				
				1500	0.995				
		-	G	273	0.606	0	Theor	-	1344
				291	0.625				
				298	0.633				
				300	0.635				
				400	0.734				
				500	0.817				
				600	0.883				
				700	0.933				
				800	0.972				
				900	1.005				
				1000	1.032				
				1100	1.055				
				1200	1.076				
				1300	1.094				
		-	G	298.16	0.633	0	Theor	-	948
				400	0.734				
				500	0.818				
				600	0.883				
				700	0.933				
				800	0.972				
				900	1.004				
				1000	1.032				
		-	G	298.16	0.632	0	Theor	-	450
				300	0.634				
				400	0.735				
				500	0.818				
				600	0.883				
				700	0.933				
				800	0.972				
				900	1.005				
				1000	1.032				
				1100	1.056				
				1200	1.077				
				1300	1.095				
				1400	1.112				
				1500	1.128				
		-	G	298.16	0.616	0	Theor	-	1702
				300	0.618				
				400	0.708				
				500	0.779				
				600	0.833				
				700	0.875				
				800	0.906				
				900	0.929				
				1000	0.946				
				1100	0.960				
				1200	0.971				
				1300	0.981				
				1400	0.988				
				1500	0.994				
SULFURYL FLUORIDE	SO_2F_2	-	G	100	0.351	0	Theor	-	24959
				200	0.505				
				298.15	0.645				
				300	0.647				
				400	0.749				
				500	0.832				
				600	0.875				
				700	0.913				
				800	0.941				
				900	0.962				
				1000	0.978				
				1100	0.991				
				1200	1.001				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
SULFURYL FLUORIDE (continued)	SO_2F_2	-	G	1300 1400 1500	1.009 1.015 1.020	0	Theor	-	24959
1,1,2,2-TETRABROMO-ETHANE	$(CHBr_2)_2$	-	L	285-323 289-373 288-405	0.49 0.51 0.53	1	Exper	-	731
1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE	$(CCl_2F)_2$	-	G	353.15 413.15	0.634 0.683	1	Deriv	-	28272
1,1,2,2-TETRACHLORO-ETHANE	$(CHCl_2)_2$	-	L	290-327 292-353 292-354 291-400 288-414 289-418	0.94 1.02 1.04 1.02 1.05 1.06	1	Exper	-	731
TETRACHLORO-ETHYLENE	$(CCl_2)_2$	-	L	249-289 289-392	0.88 0.92	1	Exper	±0.1	731
TETRADECANE	$CH_3(CH_2)_{12}CH_3$	99.93	L	280 282.71 285.88 288.48 290 291.74 295.65 298.16 298.60 300 302.77	2.169 2.176 2.183 2.188 2.191 2.196 2.204 2.210 2.211 2.215 2.222	1	Exper	±0.1	550
1,2,3,4-TETRAMETHYL-BENZENE	$C_6H_2(CH_3)_4$	-	L	276.5 281.8 286.5 291.9	1.741 1.745 1.749 1.757	1	Exper	0.05	33584
		-	L	285-328 289-372 290-410 289-471	1.89 1.97 2.04 2.16	1	Exper	-	1562
1,2,3,5-TETRAMETHYL-BENZENE	$C_6H_2(CH_3)_4$	-	L	255.3 275.7 281.6 288.6 297.1	1.678 1.732 1.745 1.766 1.791	1	Exper	0.05	33584
1,2,4,5-TETRAMETHYL-BENZENE	$C_6H_2(CH_3)_4$	-	L	361-404 361-429 361-466	2.16 2.21 2.27	1	Exper	-	1562
THIONYL CHLORIDE	$SOCl_2$	-	G	100 200 298.15 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500	0.358 0.492 0.560 0.561 0.600 0.626 0.643 0.655 0.664 0.670 0.675 0.679 0.682 0.684 0.686 0.688	0	Theor	-	24959

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
THIONYL FLUORIDE	SOF_2	-	G	100	0.410	0	Theor	-	24959
				200	0.543				
				298.15	0.660				
				300	0.662				
				400	0.745				
				500	0.801				
				600	0.840				
				700	0.867				
				800	0.887				
				900	0.901				
				1000	0.912				
				1100	0.921				
				1200	0.928				
				1300	0.933				
				1400	0.937				
				1500	0.941				
THIOPHOSGENE	$CSCl_2$	-	G	273	0.544	0	Theor	-	1360
				291	0.558				
				298	0.562				
				300	0.563				
				400	0.611				
				500	0.640				
				600	0.661				
				700	0.675				
				800	0.685				
				900	0.692				
				1000	0.697				
TIN TETRACHLORIDE	$SnCl_4$	-	L	266.1	0.61	1	Exper	±2	33583
				294.0	0.63				
		-	L	287-371	0.55	1	Deriv	-	9340
		-	L	298.15	0.61	1	Exper	-	33587
TITANIUM TETRACHLORIDE	$TiCl_4$	-	L	251.6	0.800	1	Exper	±2	33583
				294.3	0.807				
m-TOLUIC ACID	$CH_3C_6H_4COOH$	-	L	381.90	2.29	1	Exper	-	21796
o-TOLUIC ACID	$CH_3C_6H_4COOH$	-	L	376.85	2.09	1	Exper	-	21796
p-TOLUIC ACID	$CH_3C_6H_4COOH$	-	L	452.75	2.36	1	Exper	-	21796
TRIBROMOFLUOROMETHANE	CBr_3F	-	G	100	0.201	0	Theor	-	23025
				298.16	0.311				
				1000	0.386				
				1500	0.393				
1,2,3-TRIBROMOPROPANE	$CHBr(CH_2Br)_2$	-	L	290-350	0.65	1	Exper	-	731
				292-373	0.66				
				293-396	0.68				
				293-428	0.70				
				293-468	0.73				
				290-491	0.78				
1,1,1-TRICHLOROETHANE	CH_3CCl_3	-	G	298	0.776	0	Theor	-	32178
				347.3	0.767				
				400	0.892				
				600	1.048				
TRICHLOROETHYLENE	$CHClCCl_2$	-	L	289-308	0.89	1	Exper	-	731
				285-329	0.93				
				289-353	0.96				
		-	L	298.15	1.159	1	Exper	-	11120
1,2,3-TRICHLOROPROPANE	$ClCH_2CHClCH_2Cl$	-	L	291-350	1.22	1	Exper	-	731
				291-390	1.27				
				290-427	1.31				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
TRICHLOROSILANE	$SiHCl_3$	-	G	100	0.343	0	Theor	-	12098
				200	0.466				
				298.16	0.556				
				300	0.557				
				400	0.615				
				500	0.652				
				600	0.679				
				700	0.698				
				800	0.713				
				900	0.725				
				1000	0.734				
1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE	CF_3CCl_3	-	G	200	0.499	0	Theor	-	3933
				298.16	0.626				
				400	0.721				
				500	0.785				
				600	0.828				
				700	0.862				
				800	0.885				
		-	G	298	0.624	0	Theor	-	32178
				318.8	0.647				
				400	0.720				
				600	0.830				
TRIDECANE	$CH_3(CH_2)_{11}CH_3$	99.95	L	270	2.154	1	Exper	±0.1	550
				271.66	2.155				
				276.53	2.159				
				278.11	2.161				
				280	2.164				
				283.24	2.171				
				285.26	2.175				
				290	2.186				
				291.39	2.198				
				298.16	2.207				
				299.11	2.209				
				300	2.212				
				306.38	2.231				
				310	2.240				
1,1,1-TRIFLUORO-ETHANE	CH_3CF_3	-	G	100	0.476	0	Theor	-	47854
				200	0.709				
				298.15	0.932				
				300	0.936				
				400	1.132				
				500	1.289				
				600	1.413				
				700	1.512				
				800	1.592				
				900	1.659				
				1000	1.715				
				1100	1.762				
				1200	1.803				
				1300	1.838				
				1400	1.867				
				1500	1.892				
		-	G	250	0.823	0	Theor	-	32178
				298	0.930				
				400	1.134				
				600	1.419				
TRIFLUOROIODO-METHANE	CF_3I	-	G	100	0.214	0	Theor	-	4037
				200	0.299				
				273.16	0.348				
				298.16	0.362				
				300	0.363				
				400	0.410				
				500	0.445				
				600	0.470				
				700	0.487				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
TRIFLUOROIODO-METHANE (continued)	CF_3I	-	G	800 900 1000	0.500 0.510 0.517	0	Theor	-	4037
TRIMETHYLAMINE	$(CH_3)_3N$	-	G	273.15 291.15 298.15 373.15 473.15 573.15 673.15 773.15 873.15 973.15 1073.15 1173.15 1273.15 1373.15 1473.15	1.448 1.523 1.552 1.874 2.281 2.630 2.923 3.170 3.381 3.564 3.723 3.859 3.978 4.081 4.171	0	Theor	-	1231
1,2,4-TRIMETHYL-BENZENE	$C_6H_3(CH_3)_3$	-	L	239.5 246.9 260.5 277.0 277.4 283.6 297.3	1.623 1.640 1.674 1.724 1.720 1.736 1.766	1	Exper	0.05	33584
		-	L	288-329 289-353 289-373 290-406 289-441	1.82 1.85 1.90 1.97 2.02	1	Exper	-	1562
		99.994	L	294.26 299.82 305.37 310.93 316.49 322.04 327.59 333.15 338.71 344.26 349.82 355.37 360.93 366.48 372.04 277.59	1.734 1.750 1.767 1.784 1.802 1.820 1.838 1.857 1.876 1.896 1.916 1.937 1.958 1.979 2.002 2.025	Sat.	Exper	1	1278
2,2,3-TRIMETHYL-BUTANE	$(CH_3)_3CCH(CH_3)_2$	99.69	G	328.80 348.85 369.20 400.40 434.30	1.578 1.661 1.743 1.869 2.001	0.3	Exper	±0.1	3901
		99.69	G	328.80 348.85 369.20 400.40 434.30 461.80	1.615 1.687 1.763 1.880 2.008 2.107	0.3	Exper	±0.1	3901
		99.69	G	328.80 348.85 369.20 400.40 434.30 461.80	1.566 1.652 1.736 1.865 1.998 2.101	0.3	Exper	±0.1	3901

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2,2,3-TRIMETHYL-BUTANE (continued)	$(CH_3)_3CCH(CH_3)_2$	99.69	G	369.20	1.763	0.3	Exper	±0.1	3901
				400.40	1.880				
				434.30	2.008				
				461.80	2.107				
2,2,4-TRIMETHYL-PENTANE	$(CH_3)_3CCH_2CH(CH_3)_2$	-	L	169.6	1.62	1	Exper	<1	31769
				173.4	1.63				
				177.8	1.64				
				188.3	1.67				
				194.4	1.69				
				213.8	1.76				
				218.5	1.77				
				230.2	1.807				
				255.2	1.891				
				275.0	1.971				
				278.4	1.987				
				283.1	1.996				
				287.6	2.017				
				292.0	2.038				
				295.2	2.046				
		99.99	L	171.15	1.633	1	Exper	0.5	7833
				182.89	1.664				
				203.80	1.727				
				233.44	1.834				
				256.60	1.923				
				279.95	2.014				
				301.93	2.110				
				317.34	2.176				
		-	L	283.15	2.024	Sat.	Exper	0.1	1781
				288.15	2.042				
				293.15	2.066				
				298.15	2.088				
				303.15	2.110				
				308.15	2.133				
		99.99	G	423	2.26	1	Exper	-	7833
2,3,3-TRIMETHYL-PENTANE	$(CH_3)_2CHC(CH_3)_2CH_2CH_3$	-	L	278.15	2.077	Sat.	Exper	0.1	1781
				283.15	2.093				
				288.15	2.110				
				293.15	2.129				
				298.15	2.149				
				303.15	2.171				
				308.15	2.194				
				313.15	2.219				
				318.15	2.244				
2,3,4-TRIMETHYL-PENTANE	$[(CH_3)_2CH]_2CHCH_3$	-	L	278.15	2.082	Sat.	Exper	0.1	1781
				283.15	2.101				
				288.15	2.121				
				293.15	2.143				
				298.15	2.165				
				303.15	2.188				
				308.15	2.212				
				313.15	2.237				
				318.15	2.263				
		99.5	G	402.8	2.21	1	Exper	1	980
				463.6	2.45				
				521.6	2.66				
		99.5	G	403.0	2.188	0.5	Exper	1	980
				460.8	2.423				
				521.0	2.654				
2,4,4-TRIMETHYL-2-PENTENE	$(CH_3)_3CCHC(CH_3)_2$	-	L	183.0	1.703	1	Exper	<1	31768
				189.1	1.715				
				210.5	1.778				
				230.1	1.837				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
2,4,4-TRIMETHYL-2-PENTENE (continued)	$(CH_3)_3CCHC(CH_3)_2$	-	L	251.8	1.900	1	Exper	<1	31768
				275.2	1.987				
				281.2	2.013				
				296.0	2.079				
UNDECANE	$CH_3(CH_2)_9CH_3$	99.98	L	250	2.108	1	Exper	±0.1	550
				251.74	2.110				
				255.08	2.112				
				259.76	2.117				
				260	2.118				
				271.07	2.135				
				279.07	2.153				
				280	2.155				
				280.00	2.156				
				288.50	2.179				
				289.52	2.182				
				290	2.183				
				297.98	2.207				
				298.16	2.208				
				298.92	2.209				
				300	2.213				
		-	L	258.5	2.10$\bar{5}$	1	Exper	0.05	33584
				274.9	2.13$\bar{8}$				
				283.4	2.15$\bar{5}$				
				290.8	2.176				
				298.0	2.192				
VINYL ACETATE	$CH_3COOCHCH_2$	-	G	407.15	1.43$\bar{5}$	1	Exper	-	28289
WATER, DIDEUTERATED	D_2O	99.2	L	283.15	4.225	1	Exper	±0.1	8796
				285.12	4.223				
				287.03	4.217				
				287.81	4.217				
				287.93	4.21$\bar{5}$				
				288.15	4.216				
				289.87	4.215				
				291.91	4.212				
				292.71	4.210				
				292.90	4.210				
				293.15	4.210				
				293.51	4.211				
				294.68	4.208				
				294.90	4.209				
				294.90	4.207				
				296.71	4.209				
				297.84	4.205				
				298.15	4.205				
				298.68	4.205				
				303.15	4.202				
				303.18	4.202				
				305.07	4.202				
				305.16	4.201				
				306.98	4.200				
				307.07	4.202				
				308.15	4.200				
				309.01	4.201				
				310.78	4.202				
				310.81	4.199				
				311.97	4.200				
				313.15	4.200				
				314.15	4.198				
				314.39	4.198				
				315.21	4.199				
				315.50	4.197				
				316.93	4.199				
				318.15	4.200				
				320.99	4.202				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
WATER, DIDEUTERATED (continued)	D_2O	99.2	L	323.15	4.201	1	Exper	±0.1	8796
				325.80	4.204				
		99.2	L	288.15	4.225	1	Exper	-	11671
				293.15	4.216				
				298.15	4.207				
				303.15	4.202				
				308.15	4.199				
				313.15	4.197				
				318.15	4.197				
		96.0	L	293	4.221	1	Exper	±0.15	1237
				303	4.203				
				313	4.188				
				323	4.177				
				333	4.169				
				343	4.157				
				353	4.146				
				363	4.136				
				373	4.133				
				383	4.136				
				393	4.138				
				398	4.143				
		-	L	293.15	4.192	50	Exper	-	26587
				313.15	4.176				
				333.15	4.18				
				353.15	4.167				
				373.15	4.163				
				393.15	4.17				
				413.15	4.18				
				433.15	4.200				
				453.15	4.243				
				473.15	4.310				
				493.15	4.397				
				513.15	4.531				
				533.15	4.728				
		-	L	293.15	4.184	100	Exper	-	26587
				313.15	4.167				
				333.15	4.155				
				353.15	4.163				
				373.15	4.151				
				393.15	4.151				
				413.15	4.159				
				433.15	4.184				
				453.15	4.217				
				473.15	4.280				
				493.15	4.364				
				513.15	4.489				
				533.15	4.678				
				553.15	4.929				
				573.15	5.414				
		-	L	303.16	4.208	1	Corr	-	23644
				333.16	4.204				
		-	G	0	1.692	0	Theor	-	15168
				100	1.755				
				200	1.830				
				300	1.909				
				400	1.995				
				500	2.079				
				600	2.160				
				700	2.231				
				800	2.302				
				900	2.363				
				1000	2.417				
				1100	2.467				
				1200	2.509				
				1300	2.549				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
WATER, DIDEUTERATED (continued)	D_2O	-	G	1400	2.578	0	Theor	-	15168
				1500	2.607				
		-	G	50	1.662	0	Theor	-	10503
				100	1.662				
				110	1.663				
				120	1.663				
				130	1.663				
				140	1.663				
				150	1.664				
				160	1.665				
				170	1.665				
				180	1.667				
				190	1.668				
				200	1.670				
				210	1.672				
				220	1.675				
				230	1.678				
				240	1.682				
				250	1.686				
				260	1.690				
				270	1.695				
				280	1.700				
				290	1.706				
				300	1.711				
				310	1.717				
				320	1.724				
				330	1.730				
				340	1.737				
				350	1.743				
				360	1.750				
				370	1.757				
				380	1.765				
				390	1.772				
				400	1.779				
				450	1.817				
				500	1.857				
				550	1.897				
				600	1.939				
				650	1.981				
				700	2.024				
				750	2.067				
				800	2.110				
				850	2.151				
				900	2.191				
				950	2.230				
				1000	2.268				
				1050	2.304				
				1100	2.338				
				1150	2.370				
				1200	2.401				
				1300	2.458				
				1400	2.508				
				1500	2.553				
		-	G	273.15	1.692	0	Theor	-	21010
				373.15	1.755				
				473.15	1.830				
				573.15	1.909				
				673.15	1.995				
				773.15	2.078				
				873.15	2.160				
				973.15	2.231				
				1073.15	2.302				
				1173.15	2.369				
				1273.15	2.417				
				1373.15	2.467				
				1473.15	2.509				

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
m-XYLENE	$C_6H_4(CH_3)_2$	-	L	217.0	1.502	1	Exper	<1	21826
				221.1	1.519				
				225.0	1.523				
				226.9	1.523				
				275.0	1.657				
				275.3	1.653				
		97.7	L	230	1.553	1	Exper	1	33589
				231.40	1.555				
				237.18	1.562				
				240	1.565				
				249.43	1.581				
				250	1.583				
				260	1.607				
				262.62	1.613				
				268.83	1.635				
				270	1.636				
				276.80	1.655				
				276.97	1.656				
				280	1.676				
				284.83	1.686				
				290	1.700				
				292.93	1.711				
				300	1.731				
				305.27	1.748				
				318.16	1.784				
				320	1.797				
		-	L	273.15	1.686	1	Corr	4.1	56767
				283.15	1.699				
				293.15	1.715				
				303.15	1.724				
				313.15	1.741				
				323.15	1.757				
				333.15	1.774				
				343.15	1.791				
				353.15	1.816				
				363.15	1.841				
				373.15	1.866				
				383.15	1.895				
				393.15	1.925				
				403.15	1.958				
				413.15	1.987				
				423.15	2.021				
				433.15	2.050				
				443.15	2.084				
				453.15	2.113				
				463.15	2.142				
				473.15	2.176				
		-	L	290-329	1.79	1	Exper	-	1562
				289-372	1.88				
				290-405	1.96				
		-	L	293.15	1.65	1	Exper	-	21778
				303.15	1.68				
				412.35	2.06				
		-	L	293.15	1.643	1	Corr	-	9335
				293.15	1.691				
				298.15	1.660				
				298.15	1.713				
		-	L	294-379	1.87	1	Exper	±0.3	17524
		-	G	273.15	1.109	1	Corr	-	56767
				323.15	1.297				
				373.15	1.464				
				423.15	1.653				
				473.15	1.841				
				523.15	1.987				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
m-XYLENE (continued)	$C_6H_4(CH_3)_2$	-	G	573.15	2.134	1	Corr	-	56767
				623.15	2.259				
				673.15	2.385				
				723.15	2.489				
				773.15	2.594				
				823.15	2.678				
				873.15	2.741				
				923.15	2.803				
				973.15	2.887				
				1023.15	2.950				
				1073.15	3.012				
				1123.15	3.075				
				1173.15	3.138				
				1223.15	3.180				
				1273.15	3.222				
		-	G	298.16	1.197	0	Theor	-	33589
				400	1.577				
				500	1.910				
				600	2.190				
				800	2.621				
				1000	2.928				
				1500	3.387				
		-	G	298.16	1.202	0	Theor	-	5162
				300	1.208				
				400	1.578				
				500	1.909				
				600	2.188				
				700	2.421				
				800	2.617				
				900	2.784				
				1000	2.926				
				1100	3.047				
				1200	3.151				
				1300	3.240				
				1400	3.318				
				1500	3.385				
		-	G	300	1.206	1	Corr	-	2500
				400	1.574				
				500	1.901				
				600	2.187				
				800	2.635				
				1000	2.917				
		-	G	393	1.545	0.2	Exper	-	33589
		-	G	393	1.541	0	Exper	-	33589
		-	G	428	1.683	0.7	Exper	-	33589
		-	G	428	1.671	0	Exper	-	33589
		-	G	463	1.801	1	Exper	-	33589
		-	G	463	1.789	0	Exper	-	33589
o-XYLENE	$C_6H_4(CH_3)_2$	-	L	250	1.636	1	Exper	0.2	33589
				251.65	1.642				
				256.79	1.657				
				260	1.667				
				268.19	1.681				
				268.81	1.692				
				270	1.690				
				276.52	1.707				
				280	1.718				
				284.82	1.733				
				290	1.746				
				293.52	1.756				
				300	1.774				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
o-XYLENE (continued)	$C_6H_4(CH_3)_2$	-	L	301.31	1.776	1	Exper	0.2	33589
				301.86	1.789				
		-	L	253.3	1.636	1	Exper	<1	21826
				263.0	1.657				
				275.2	1.690				
				275.3	1.686				
				278.5	1.695				
				285.3	1.711				
				288.7	1.720				
				295.1	1.732				
		-	L	273.15	1.732	1	Corr	4.1	56767
				283.15	1.753				
				293.15	1.770				
				303.15	1.791				
				313.15	1.807				
				323.15	1.824				
				333.15	1.841				
				343.15	1.866				
				353.15	1.879				
				363.15	1.900				
				373.15	1.920				
				383.15	1.941				
				393.15	1.966				
				403.15	1.992				
				413.15	2.013				
				423.15	2.042				
				433.15	2.075				
				443.15	2.109				
				453.15	2.138				
				463.15	2.171				
				473.15	2.213				
		-	L	289-329	1.77	1	Exper	-	1562
				288-373	1.85				
				288-405	1.91				
		-	L	293.15	1.689	1	Exper	-	21778
				303.15	1.720				
				414.15	2.085				
		-	L	295-300	1.95	1	Exper	±0.3	17524
		-	G	273.15	1.172	1	Corr	-	56767
				323.15	1.339				
				373.15	1.506				
				423.15	1.674				
				473.15	1.841				
				523.15	1.987				
				573.15	2.134				
				623.15	2.259				
				673.15	2.385				
				723.15	2.489				
				773.15	2.594				
				823.15	2.678				
				873.15	2.741				
				923.15	2.803				
				973.15	2.887				
				1023.15	2.950				
				1073.15	3.012				
				1123.15	3.075				
				1173.15	3.138				
				1223.15	3.180				
				1273.15	3.222				
		-	G	298.16	1.258	0	Theor	-	33589
				400	1.619				
				500	1.937				
				600	2.207				
				800	2.629				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
o-XYLENE (continued)	$C_6H_4(CH_3)_2$	-	G	1000	2.931	0	Theor	-	33589
				1500	3.389				
		-	G	298.16	1.255	0	Theor	-	5162
				300	1.262				
				400	1.617				
				500	1.936				
				600	2.206				
				700	2.434				
				800	2.626				
				900	2.790				
				1000	2.930				
				1100	3.051				
				1200	3.154				
				1300	3.243				
				1400	3.320				
				1500	3.387				
		-	G	300	1.252	1	Deriv	-	2500
				400	1.606				
				500	1.910				
				600	2.241				
				800	2.643				
				1000	2.929				
		-	G	300	1.258	1	Cited	-	2500
				400	1.619				
				500	1.937				
				600	2.207				
				800	2.629				
				1000	2.931				
		-	G	393	1.588	0.2	Exper	-	33589
		-	G	393	1.584	0	Exper	-	33589
		-	G	428	1.722	0.7	Exper	-	33589
		-	G	428	1.714	0	Exper	-	33589
		-	G	463	1.841	1	Exper	-	33589
		-	G	463	1.813	0	Exper	-	33589
p-XYLENE	$C_6H_4(CH_3)_2$	99.98	L	290	1.705	1	Exper	1	33589
				292.02	1.719				
				300	1.737				
				301.10	1.733				
				310.04	1.751				
				314.69	1.783				
				318.47	1.813				
				319.24	1.793				
				320	1.797				
				327.36	1.846				
				338.96	1.907				
				340	1.892				
				345.49	1.908				
				354.65	1.956				
				360	1.986				
		-	L	290.7	1.682	1	Exper	-	21826
				292.1	1.678				
				294.4	1.682				
				299.0	1.699				
				299.4	1.703				
		-	L	289-329	1.79	1	Exper	-	1562
				288-373	1.91				
				293-405	1.96				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
p-XYLENE (continued)	$C_6H_4(CH_3)_2$	-	L	293.15	1.662	1	Exper	-	21778
				410.65	2.065				
		-	L	293.15	1.695	1	Corr	4.1	56767
				303.15	1.724				
				313.15	1.757				
				323.15	1.787				
				333.15	1.816				
				343.15	1.849				
				353.15	1.883				
				363.15	1.920				
				373.15	1.958				
				383.15	1.996				
				393.15	2.033				
				403.15	2.075				
				413.15	2.109				
				423.15	2.151				
				433.15	2.188				
				443.15	2.226				
				453.15	2.264				
				463.15	2.301				
				473.15	2.343				
		-	L	294-379	1.87	1	Exper	±0.3	17524
				295-399	1.90				
		-	G	273.15	1.109	1	Corr	-	56767
				323.15	1.297				
				373.15	1.464				
				423.15	1.653				
				473.15	1.841				
				523.15	1.987				
				573.15	2.134				
				623.15	2.259				
				673.15	2.385				
				723.15	2.489				
				773.15	2.594				
				823.15	2.678				
				873.15	2.741				
				923.15	2.803				
				973.15	2.887				
				1023.15	2.950				
				1073.15	3.012				
				1123.15	3.075				
				1173.15	3.138				
				1223.15	3.180				
				1273.15	3.222				
		-	G	298.16	1.192	0	Theor	-	33589
				400	1.564				
				500	1.896				
				600	2.176				
				800	2.610				
				1000	2.920				
				1500	3.384				
		-	G	298.16	1.195	0	Theor	-	5162
				300	1.202				
				400	1.565				
				500	1.894				
				600	2.174				
				700	2.409				
				800	2.607				
				900	2.774				
				1000	2.917				
				1100	3.040				
				1200	3.145				
				1300	3.235				
				1400	3.313				
				1500	3.381				

(continued)

SPECIFIC HEAT OF FLUIDS (continued)

Substance Name	Chemical Formula	Purity %	Phys. State (L, G)	Temp. K	C_p kJ kg^{-1} K^{-1}	Pres. Bar	Method Used	Rept'd. Acc., %	TPRC No.
p-XYLENE (continued)	$C_6H_4(CH_3)_2$	-	G	300 400 500 600 800 1000	1.195 1.564 1.892 2.179 2.630 2.916	1	Corr	-	2500
		-	G	393	1.541	0.2	Exper	-	33589
		-	G	393	1.537	0	Exper	-	33589
		-	G	428	1.691	0.7	Exper	-	33589
		-	G	428	1.679	0	Exper	-	33589
		-	G	463	1.793	1	Exper	-	33589
		-	G	463	1.781	0	Exper	-	33589

SECTION II - SUPPLEMENTAL REFERENCES

A

ACETALDEHYDE
Gas: 3985 6339 18269 21746 26338
33982 33983 41288 49916 56372
Liquid: 954 1514 3002 3985 12862
28401 49916

ACETIC ACID
Gas: 22278
Liquid: 465 1783 12862 17062 18269
22724 26417 28405 34822 37750
38169 40184 44406 50253

ALLYL ALCOHOL
Gas: 44325
Liquid: 1288 44325

AMMONIA, TRIDEUTERATED
Gas: 34722 70829
Liquid: 65396

ANILINE
Gas: 63931
Liquid: 834 10394 11802 21399 21894
22724 26417 37750 38169 40184
44535 55830

ARSINE
Gas: 20533
Liquid: 440 33706 47415

B

BENZENE, HEXADEUTERATED
Liquid: 25220 26917 26918

BENZOIC ACID
Gas: 5186
Liquid: 1699 2024 5186 14680 16021
17062 23327 25528 28440 34822

p-BENZOQUINONE
Gas: 36436
Liquid: 1172

BENZYL ALCOHOL
Liquid: 15365 18269

BORON TRIBROMIDE
Gas: 6339 6538 10563 10832 26125
27798 75473 75494

BORON TRICHLORIDE
Gas: 6339 6538 7006 8282 10563
10832 10928 15932 26107 27798
27854 57314 75473 75474

BROMINE, MONATOMIC
Gas: 7001 10832 36301 60200
Liquid: 34822 60200

BROMINE CHLORIDE
Gas: 625 7001 9708 10832

BROMINE FLUORIDE
Gas: 7001 9708 10832

BROMINE PENTAFLUORIDE
Gas: 7001 64266

BROMOBENZENE
Gas: 22026 22899 54836 63931
Liquid: 834 13886 15314 22026 34822
38169 40184 43272

1-BROMOBUTANE
Gas: 27788 36827 43781
Liquid: 21843 34822

BROMODICHLOROMETHANE
Gas: 292 664 7784 10477 23025
28274 64391 64392
Liquid: 7784 23025 28292

B

BROMOETHANE
Gas: 27788 49793
Liquid: 834 18269 34822 40184 49793

BROMOFORM
Gas: 292 701 1507 5178 7784
28274 46803 46804 64391 64392
Liquid: 7784 18269 23025 28292

BROMOMETHANE
Gas: 292 5178 7784 10204 18269
28274 46803 46804
Liquid: 1369 7784 10394 11853 28292
34822 38169 49793

1-BROMOPROPANE
Gas: 27788
Liquid: 18269 40184

BROMOTRICHLOROMETHANE
Gas: 292 5178 7784 28274 64391
64392
Liquid: 7784 23025

1,3-BUTADIENE
Gas: 1008 1076 1119 5065 6339
11748 18248 28281 28468 30298
34172 37757 42510 45765
Liquid: 1119 2500 11037 11041 42510
45765

1-BUTANOL
Gas: 1502 16990 18269 27811 28983
35914 41433
Liquid: 465 813 834 12862 18269
26417 28983 35914 41433 44406
48328 62083 62112 73615

2-BUTANOL
Gas: 1502 27438
Liquid: 13331 21778 48774

2-BUTANONE
Gas: 10761 23720 37226
Liquid: 465 1187 13883 15314 18269
34822 37226 45169 46894 50607

1-BUTENE
Gas: 794 1008 2676 6339 8599
18248 19088 28281 34172 37757
42508 45765 47007 51600 58887
Liquid: 2002 2500 2676 11037 19088
35625 40544 42508 45765 58887

2-BUTENE
Gas: 1008 18248 35191
Liquid: 35625

cis-2-BUTENE
Gas: 794 2445 2500 6339 8599
18269 19088 28281 34172 42508
45568 45765 51600
Liquid: 1874 2500 42508 45568 45765

trans-2-BUTENE
Gas: 794 6339 8599 18269 19088
28281 34172 42508 45765 51600
Liquid: 1894 19088 42508 45765

BUTYL ACETATE
Gas: 19338 51738
Liquid: 13883 15314 19338 51738

BUTYLBENZENE
Gas: 794 6339 23064 34172 37167
Liquid: 18269 23064 38981 45765

tert-BUTYLBENZENE
Gas: 28472
Liquid: 45765

BUTYL ETHER
Liquid: 10550

B

1-BUTYNE
Gas: 794 6339 18269 34172 42509
Liquid: 28406 34822 42509 45765

2-BUTYNE
Gas: 794 1008 6339 13244 28281
35191
Liquid: 2500 4813 18269 42509

C

CARBON, ATOMIC
Gas: 794 6562 6625 6996 6999
8274 8282 10530 10928 17036
19088 24721 36301 60667 74632
Liquid: 14114

CARBON DISULFIDE
Gas: 5178 8282 10407 10530 10832
12105 13938 22026 22899 23007
23890 25591 25700 32769 50641
57545 59354 59900
Liquid: 834 967 1344 10394 12105
13790 18269 21745 22026 24177
26198 26417 30658 31683 40184
42678 55610 60646 64281 68640
69908

CARBON MONOSULFIDE
Gas: 8282 10530 45281 45282
Liquid: 52203

CARBON SUBOXIDE
Gas: 24721 54163 56048 60667
Liquid: 1288 6332 36444

CARBON TETRABROMIDE
Gas: 292 5178 7784 28274 46803
46804
Liquid: 572 1256 7784 9692 18269
34822 38169

CARBONYL CHLORIDE FLUORIDE
Gas: 683 10832 45281 45282

CARBONYL FLUORIDE
Gas: 680 683 8282 10530 10928
24959
Liquid: 47837 49195

CARBONYL SULFIDE
Gas: 5178 10530 13938 23007 23890
24959 25591 25700 32769 50641
59354
Liquid: 1344 12093

CHLORINE, MONATOMIC
Gas: 7001 8274 8282 10530 10928
13130 17036 36301
Liquid: 34822

CHLORINE DIOXIDE
Gas: 1066 18269 25700

CHLORINE FLUORIDE
Gas: 947 6587 7001 8274 9708
10530 10718 10832 10928 17036
18269
Liquid: 6587

CHLORINE MONOXIDE
Gas: 1606 18269 30153

CHLORINE OXIDE
Gas: 10530 10718 10928 17036 24959

CHLORINE TRIFLUORIDE
Gas: 1799 1809 7001 10711
Liquid: 1809 39029 70128 70129 76272

CHLOROBENZENE
Gas: 942 9337 22026 22899 54836
Liquid: 666 834 16582 21399 22026
22724 26417 30658 34822 38169
40184 43272 55610

C

CHLORODIFLUOROMETHANE, MONODEUTERATED
Gas: 61223

CHLOROETHANE
Gas: 437 1777 1806 18269 22652
27788 37757 41431
Liquid: 465 1268 1777 5410 22652
28647 34822 41431

CHLOROFLUOROMETHANE
Gas: 23025 28274 34964 64392
Liquid: 23025 28292

CHLOROMETHYLIDYNE
Gas: 10832

1-CHLORO-2-METHYLPROPANE
Liquid: 40184

1-CHLOROPROPANE
Gas: 27788 35677 41431
Liquid: 465 35677 40184 41431

CHLOROSILANE
Gas: 591 10832 20690 42249 42250
42528 43004 43005 46803 46804
64383 64384
Liquid: 591 20690

α-CHLOROTOLUENE
Liquid: 10394 22724 34822

CHLOROTRIBROMOMETHANE
Gas: 292 5178 28274 64391 64392
Liquid: 23025

CUMENE
Gas: 149 794 6339 31501 34172
56305
Liquid: 13886 15314 18269 27636 72370

CYANOGEN
Gas: 1604 3281 5178 8282 10530
10928 18269 36107 39093 45281
45282
Liquid: 11876 34822

CYANOGEN CHLORIDE
Gas: 2445 10832 18269 24959
Liquid: 1604

CYCLOHEXANE
Gas: 794 1008 1697 1816 6339
8980 10393 22026 22899 23064
28281 28397 28510 34172 41288
49078 50909 57381 74000
Liquid: 405 526 708 5142 9330
11381 17062 22026 23064 28382
28385 33046 38169 38449 40569
40570 42276 43272 52599 52600
54732 55610 57033 62622 65341
65342

CYCLOHEXENE
Gas: 8980 28403 57381 57987
Liquid: 405 31768 45765 57987

CYCLOPROPANE
Gas: 1008 2445 3863 10393 11104
36915 57381 59249
Liquid: 5618 57033

p-CYMENE
Liquid: 22724

D

DEUTERIUM, MONATOMIC
Gas: 60667

1,2-DIBROMOETHANE
Gas: 1769 7890 49793
Liquid: 1362 1369 7823 18269 34822
49793 52203 54732 60646

D

DIBROMOMETHANE
Gas: 292 626 10191 28274 64391 64392
Liquid: 3533 14916 18269 28292

1,1-DICHLOROETHANE
Gas: 279
Liquid: 18269

1,2-DICHLOROETHANE
Gas: 731 1769 7890 34574 37143 41431
Liquid: 834 7823 18269 41431 54732

1,2-DICHLOROETHYLENE
Gas: 292
Liquid: 18269

DICHLOROFLUOROMETHANE, MONODEUTERATED
Gas: 61223

DICHLOROMETHANE
Gas: 292 1507 28274 28651 32701 34556 35774 37757 46803 46804 51332 64391 64392
Liquid: 465 834 1360 1578 5410 9091 15361 18269 28153 28292 28417 28647 36452 51332

1,2-DICHLOROPROPANE
Gas: 41431
Liquid: 18269 41431

1,1-DICHLOROTETRAFLUOROETHANE
Gas: 69656 69657

2,2-DICHLORO-1,1,1-TRIFLUOROETHANE
Liquid: 3933 18269

DIETHYL OXALATE
Liquid: 22724

1,1-DIFLUOROETHYLENE
Gas: 30167
Liquid: 49049

DIFLUOROMETHANE
Gas: 701 5178 8282 10530 10928 28274 64391 64392
Liquid: 339 28292

DIIODOMETHANE
Gas: 5178 10028 28274 28651 46803 46804 64391 64392
Liquid: 18269

DIMETHYLAMINE
Gas: 317 15325 18269 25770 28272
Liquid: 11866

2,2-DIMETHYLBUTANE
Gas: 794 1815 6339 19088 34172
Liquid: 5626 19088 45765

2,3-DIMETHYLBUTANE
Gas: 957 4980 6339 19088 28281 34172
Liquid: 603 18269 19088 45765

1,2-DIMETHYLCYCLOPENTANE
Liquid: 34822

2,3-DIMETHYLHEXANE
Gas: 794 34172

2,5-DIMETHYLHEXANE
Gas: 794 34172
Liquid: 9330 45765

3,3-DIMETHYLHEXANE
Gas: 794 34172
Liquid: 18269 45765

3,4-DIMETHYLHEXANE
Gas: 794 34172

DIMETHYLPROPANE
Gas: 1254 3863 5178 6339 18269 19088 28281 34172 65033 69033
Liquid: 3863 12077 24835 38169 49183 53408 69033

D

2,5-DIMETHYLTHIOPHENE
Liquid: 35002 46894

m-DINITROBENZENE
Liquid: 1172

o-DINITROBENZENE
Liquid: 1172

p-DINITROBENZENE
Liquid: 1172

1,1-DIPHENYLETHANE
Gas: 23064
Liquid: 23064

DIPHENYLMETHANE
Liquid: 1200 1477 9330 18269 21826 21894

DODECANE
Gas: 794 29181 34172 51384
Liquid: 405 708 834 27707 29181 38853 40974 40975 43978 44504 45765 50824 51367 51384 65782 72308

E

ETHANE, HEXADEUTERATED
Gas: 1521 11635 11640

ETHANETHIOL
Gas: 1797 2007 23748 27102 28771 50182
Liquid: 1797 2007 18269 23748 24177 27102 59026

ETHYL ACETATE
Gas: 19338 37738 51738
Liquid: 465 834 3002 12862 18269 19338 22724 33189 37738 40184 44406 51738 60646

ETHYLBENZENE
Gas: 794 1008 1076 6339 28281 28296 34172 37167 56305
Liquid: 834 2500 5096 13886 15314 17062 18269 20569 21399 21894 22724 38169 45765 62112 65103

ETHYL BUTYRATE
Liquid: 465 12862 13883 15314 22724 37738 40184 60646

ETHYLENE OXIDE
Gas: 1852 28245 31578 37757 42251 42252 48775
Liquid: 1514 31578 34822 38169

ETHYL FORMATE
Gas: 22026 22899 52327
Liquid: 465 12862 13883 15314 22026 40184 52327 53209 53210

3-ETHYLHEXANE
Gas: 794 34172

3-ETHYL-2-METHYLPENTANE
Gas: 794

3-ETHYL-3-METHYLPENTANE
Gas: 794 34172

ETHYL PROPIONATE
Liquid: 465 22724 60646

F

FLUORINE, MONATOMIC
Gas: 7001 8274 8282 10530 10928 17036 36301
Liquid: 34822

FLUOROBENZENE
Gas: 7266 8980 9727 54836 62848
Liquid: 7266 31514 31714 34822 38169

F

FLUOROETHANE
Gas: 47342

FLUOROETHYLENE
Gas: 30167 45281 45282

FLUOROMETHANE
Gas: 1833 3533 3771 5178 7784
8282 10530 18269 28274
Liquid: 7784 28292

FORMALDEHYDE
Gas: 10530 10832 18269 24721 26338
31865 45281 45282 56372 70329
Liquid: 49916

FORMYL
Gas: 10530 24721 70329

FURAN
Gas: 18603 53412
Liquid: 43492 47328

FURFURYL ALCOHOL
Liquid: 1187

H

HEXADECANE
Gas: 794 23064 29181 34172 51384
Liquid: 8429 19088 20103 23064 28101
29181 29971 37953 40974 40975
43978 44504 45765 50824 51367
51384 52599 52601 58692 61498
61499 65782 72308

HEXAFLUOROETHANE
Gas: 907 4838 54159
Liquid: 4838 10004 24984

HEXAMETHYLBENZENE
Gas: 7269 18269
Liquid: 548 9330 21896

1-HEXANOL
Gas: 27811 44325
Liquid: 834 12862 22997 44325 72308

HYDRAZINE
Gas: 6538 12901 32672 40408 40980
40981 42656 50641 59354
Liquid: 938 24177 32672 39029 40408
43870 47415

HYDROBROMIC ACID
Gas: 7001 10530 13938 21517 23890
25198 47378 50641 59354
Liquid: 21810 24177 43110 60647

HYDROCYANIC ACID
Gas: 1255 5178 8282 10042 10530
10832 10928 13938 23890 36825
37757
Liquid: 1255 1604 11874 18269 34822
36825

HYDROFLUORIC ACID
Gas: 6538 7001 7006 7051 8274
8282 8892 10530 10928 14916
17036 22959 23890 25198 28281
43805 47378 60202 69619
Liquid: 1370 1700 10435 14916 24177
69619

HYDROFLUORIC ACID, MONODEUTERATED
Gas: 25198 43805

HYDROGEN, MONATOMIC
Gas: 794 6996 8274 8282 10142
10145 10530 10591 10928 17036
24721 28850 30457 36301 60667
70329
Liquid: 14114 34822

HYDROGEN, MONODEUTERATED
Gas: 2445 25198 60667 61434 75384
Liquid: 15822 27433 30953 51450 75384

H

HYDROGEN PEROXIDE
Gas: 10671 18269 24721 33267 45281
45282 49427 49428 51250
Liquid: 1202 18269 24058 37647 51250

HYDROGEN SELENIDE
Gas: 467 23890 30155 41545

HYDROGEN SELENIDE, DIDEUTERATED
Gas: 467 30155

HYDROGEN SULFIDE, DIDEUTERATED
Gas: 10116 30155 56361
Liquid: 56361

HYDROGEN SULFIDE, DITRITIATED
Gas: 10116

HYDROGEN SULFIDE, MONODEUTERATED
Gas: 10116 35266

HYDROGEN SULFIDE, MONODEUTERATED MONOTRITIATED
Gas: 10116

HYDROGEN SULFIDE, MONOTRITIATED
Gas: 10116

HYDROQUINONE
Liquid: 1172 12954 14680 28278

HYDROXYL
Gas: 8274 8282 10145 10498 10530
10591 10928 15326 24508 24721
25198 30457 61224 70329
Liquid: 14114 34822

I

IODINE
Gas: 7001 10832 21424 27460 30301
33547 47378
Liquid: 11849 33547

IODINE, MONATOMIC
Gas: 7001 23617 30301 36301
Liquid: 34822

IODINE BROMIDE
Gas: 7001 9708 10832

IODINE CHLORIDE
Gas: 7001 9708 10832
Liquid: 35019 44845

IODINE FLUORIDE
Gas: 7001 9708 10832

IODINE PENTAFLUORIDE
Gas: 27808 30152 61836 64266
Liquid: 61836

IODOBENZENE
Gas: 54836
Liquid: 10394 14116 34822 38169

IODOMETHANE
Gas: 3797 5178 7784 28651 46803
46804
Liquid: 3533 7784 14916

ISOBUTYL ACETATE
Liquid: 22724

ISOPENTYL ACETATE
Liquid: 12862

ISOPRENE
Gas: 1008 28281 34172
Liquid: 2500 45765 57379

ISOPROPYLAMINE
Liquid: 64586

K

KETENE
Gas: 26338 31751 56372
Liquid: 31751 38169

MESITYLENE
Gas: 794 2445 5162 6339 28281 34172
Liquid: 1278 1522 2500 11381 22724 34822 43115 52599 52600

METHANE, DIDEUTERATED
Gas: 36913

METHANE, DIDEUTERATED DITRITIATED
Gas: 32977

METHANE, DITRITIATED
Gas: 32977

METHANE, MONODEUTERATED
Gas: 36913 65850
Liquid: 28640 54127

METHANE, MONODEUTERATED TRITRITIATED
Gas: 32977

METHANE, MONOTRITIATED
Gas: 32977

METHANE, TETRADEUTERATED
Gas: 18269 34722 36913
Liquid: 28640 30418 54127

METHANE, TETRATRITIATED
Gas: 32977

METHANE, TRIDEUTERATED
Gas: 36913

METHANE, TRIDEUTERATED MONOTRITIATED
Gas: 32977

METHANE, TRITRITIATED
Gas: 32977

METHANETHIOL
Gas: 1315 3979 18269 23748 28771
Liquid: 4826 12862 23748 38169

METHYL
Gas: 24721 25921 28281 39471 50641 59354 70329
Liquid: 34822

METHYL ACETATE
Gas: 22026 22899 51738 65783
Liquid: 465 18269 22026 34822 40184 51738 60646

METHYLAMINE
Gas: 15325 18269 25770 28272 34564 35775 49089
Liquid: 465 12126 28290

2-METHYLBUTANE
Gas: 3863 4980 5178 6339 8599 19088 21668 22026 22899 28488 32701 34172 37757 45861 51600
Liquid: 603 3863 19088 22026 28276 28377 28383 28606 38169 45765 65174 68634

2-METHYL-2-BUTANOL
Liquid: 12862

3-METHYL-1-BUTANOL
Gas: 16990
Liquid: 834 1790 12862 22034 22724 60646

2-METHYL-2-BUTENE
Gas: 794 1825 2916 6339 8599 34172 51600
Liquid: 19088 28400 45765

3-METHYL-1-BUTYNE
Gas: 794 6339

METHYL CYANIDE
Gas: 3083 3771 5178 28246 46898 63533 63534
Liquid: 1604 3083 18269 28246 38169 38241 69908

METHYLCYCLOHEXANE
Gas: 794 1008 1816 6339 8980 28281 28397 28510 34172 37738
Liquid: 5142 7829 17062 39436 45765

METHYLCYCLOPENTANE
Gas: 794 6339 17174 18125 28281 28510 34172
Liquid: 7829 9330 17174 19088 45765

METHYLENE
Gas: 8282 10530 10928 21827 24721 28281 50641 59354 70329
Liquid: 34822

METHYL ETHER
Gas: 1806 17775 18269 27811
Liquid: 2563 28607 34822 38169

2-METHYLFURAN
Liquid: 36938

2-METHYLHEPTANE
Gas: 794 1824 8599 34172 46161 51600
Liquid: 20005 33138 45765 46161 65174 68634 75810

3-METHYLHEPTANE
Gas: 794 34172
Liquid: 45765 70451

4-METHYLHEPTANE
Gas: 794 34172
Liquid: 45765

2-METHYLHEXANE
Gas: 794 8599 34172 46161 51600
Liquid: 24529 45765 46161 65174 68634

METHYLHYDRAZINE
Gas: 1030 39029
Liquid: 1030 33502 34822 36094 39029 70128

METHYLIDYNE
Gas: 8282 10195 10530 10832 10928 18269 24721 25198 28281 45281 45282 70329
Liquid: 34822

METHYL ISOCYANIDE
Gas: 3083
Liquid: 3083 38169

2-METHYLPENTANE
Gas: 794 957 6339 8599 19088 28281 34172 46161 51600
Liquid: 19088 46161 65174 68634

3-METHYLPENTANE
Gas: 794 957 6339 19088 28281 34172 47051 47052
Liquid: 19088 70451

2-METHYL-2-PROPANOL
Gas: 8392 16990 18269 48774 59199
Liquid: 834 1029 11120 12862 30748 30749 40184 48774 50606 62083

2-METHYL-2-PROPANOL
Gas: 1502 18269 32327 63931
Liquid: 12862 21792 26417 32326 44504 48774

2-METHYLPROPENE
Gas: 794 1076 6339 8599 18269 19088 28281 34172 37757 45568 45569 51600
Liquid: 45568 45569

METHYL SULFIDE
Gas: 1315 2007 3979 4839 14916 23748 27102 28771
Liquid: 2007 4839 14916 18269 23748 38169

N

NAPHTHALENE
Gas: 481 694 1046 1697 57381
63533 63534 75806
Liquid: 694 1172 9330 10394 11381
16021 21894 21896 28307 34822
59651 74086 74087 75806

1-NAPHTHOL
Liquid: 12954

2-NAPHTHOL
Liquid: 12954 16021

m-NITROANILINE
Liquid: 14680 17911 34822 37750

o-NITROANILINE
Liquid: 37750

p-NITROANILINE
Gas: 75798
Liquid: 14680

NITROBENZENE
Liquid: 834 11689 14096 15365 15401
21399 23026 26417 26423 34822
37750 38188 45169

NITROGEN, MONATOMIC
Gas: 794 4640 7071 8274 8282
10144 10530 10577 10928 17036
26702 27406 28968 36107 36301
38223 61224
Liquid: 14114 34822

NITROMETHANE
Gas: 519 5384 7840 26338 33866
52230 56372
Liquid: 21399 21792 34822 43115 50273
52230

O

OXYGEN, MONATOMIC
Gas: 794 8274 8282 10143 10145
10530 10577 10591 10928 17036
24721 27406 30457 36301 38223
60667
Liquid: 14114 34822

OXYGEN FLUORIDE
Gas: 947 18269 54182
Liquid: 40072

P

PENTADECANE
Gas: 794 1348 18172 34172 51384
Liquid: 27707 40974 40975 43978 45765
50824 51367 51384 61498 61499

1-PENTANOL
Gas: 27811 44325 59199
Liquid: 834 11120 12862 21399 26417
34822 44325 50606 62083 62112

3-PENTANONE
Gas: 46115
Liquid: 465 34822 50607

1-PENTENE
Gas: 794 1825 2916 6339 8599
19088 34172 45568 51600 52071
Liquid: 2002 19088 28400 35625 45568
52071

1-PENTYNE
Gas: 794 6339
Liquid: 18269

2-PENTYNE
Gas: 794 6339
Liquid: 18269

PHENYL ETHER
Gas: 970 1699
Liquid: 970 10749 28101 28925 34822
70444

P

PHOSGENE
Gas: 5178 10832 18149 18269 31994
45281 45282 53731
Liquid: 11155 18149 24177 28402 53731

PHOSPHINE
Gas: 1261 5178 10530 11474 23815
24959
Liquid: 11474 11608 33706 47415

PHOSPHORUS TRICHLORIDE
Gas: 5178 7006 26149
Liquid: 7006 21745

PHOSPHORUS TRIFLUORIDE
Gas: 5178 10530 10832 23815 24959
Liquid: 29040

PROPADIENE
Gas: 1008 2445 34172 42510 56048
Liquid: 2500 42510

1,2-PROPANEDIOL
Gas: 18269
Liquid: 834 21885 28161 28515 52216

1-PROPANOL
Gas: 1237 16990 18269 19881 21746
22278 24531 26338 27811 41433
56372
Liquid: 465 834 1237 1288 10749
11120 12862 17524 30748 30749
34822 40184 41433 50606 52599
52600 52601 62083 62112 74298

2-PROPANOL
Gas: 4301 16990 18269 21746 26338
31271 31273 33092 56372
Liquid: 834 1288 1714 3002 12862
26417 28280 31272 35625 38169
49077 72374

PROPYL ACETATE
Liquid: 465 708 22724 40184

PROPYLBENZENE
Gas: 794 1008 6339 34172 37167
Liquid: 405 708 2500 22724 34822
38981

PROPYL ETHER
Gas: 14727

PROPYNE
Gas: 794 1008 4016 6339 11104
28281 34172 42509
Liquid: 2500 42509

PYRIDINE
Gas: 2445 4450 14916 63931
Liquid: 1783 11381 12778 14916 15365
17062 22492 38169 39164 39165
45169 47328 55830

PYROCATECHOL
Liquid: 1172 12954 14680 28278

R

RESORCINOL
Liquid: 1172 12954 14680 28278

S

SILANE
Gas: 689 10832 20690 36913 42528
46792 46803 46804 64383 64384
Liquid: 591 20690

SILICON TETRACHLORIDE
Gas: 1507 2445 7006 8282 10832
20690 42249 42250 42528 45281
45282 46803 46804 48461 59340
60899 64383 64384
Liquid: 591 7006 20690 41524

S

SILICON TETRAFLUORIDE
Gas: 488 3409 7006 8282 10822
10832 20690 42528 45281 45282
60899
Liquid: 20690

STYRENE
Gas: 1008 1076 6339 28281 28396
Liquid: 1200 1477 15314 17047 21841
28395 38169 45765 57987

SULFUR, DIATOMIC
Gas: 8282 10530 11893 21596 25591
32769
Liquid: 1344 2016

SULFUR, MONATOMIC
Gas: 8282 10530 12092 17036 36301
Liquid: 25193 34822

SULFUR DICHLORIDE
Gas: 2761 30153 31265

SULFUR DIFLUORIDE
Gas: 54182

SULFUR HEXAFLUORIDE
Gas: 1906 9999 10832 33819 37112
43338 54182 65463 73567 73568
Liquid: 47048 71840 72660

SULFUR MONOCHLORIDE
Gas: 31265
Liquid: 47105

SULFUR MONOXIDE
Gas: 8282 10530

SULFUR TETRAFLUORIDE
Gas: 22212 38167 54182 54754

SULFUR TRIOXIDE
Gas: 2445 10530 14099 35010 47007
Liquid: 450 1344 14099 18269

SULFURYL FLUORIDE
Gas: 35627 45586

T

1,1,2,2-TETRABROMOETHANE
Gas: 46896

1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE
Liquid: 207 33502 70584 72341

1,1,2,2-TETRACHLOROETHANE
Gas: 731
Liquid: 44406

TETRACHLOROETHYLENE
Gas: 292 480 8794 30167 41434
45281 45282 53486 59371
Liquid: 480 834 18269 41434 41524
55509

TETRADECANE
Gas: 794 6339 34172 51384
Liquid: 405 708 9330 34822 40974
40975 43978 45765 50824 51367
51384 65782

1,2,3,4-TETRAMETHYLBENZENE
Gas: 7269 18269
Liquid: 18269

1,2,3,5-TETRAMETHYLBENZENE
Gas: 7269 23064
Liquid: 23064 45765

1,2,4,5-TETRAMETHYLBENZENE
Gas: 7269
Liquid: 15373

THIONYL CHLORIDE
Gas: 42275

T

THIONYL FLUORIDE
Gas: 42275 45281 45282
Liquid: 38681

THIOPHOSGENE
Gas: 5178 31865
Liquid: 1360 18269 58899

TIN TETRACHLORIDE
Gas: 2445 7006 28758
Liquid: 7006 28758

TITANIUM TETRACHLORIDE
Gas: 2445 2737 7001 7006 10832
30154
Liquid: 2737 7001 7006 41524

TRIBROMOFLUOROMETHANE
Gas: 7784 18269 64391 64392
Liquid: 7784 23025

1,1,1-TRICHLOROETHANE
Gas: 1071 4081 72400
Liquid: 1071 18269 34822 38169 72400

TRICHLOROETHYLENE
Gas: 292 8794 30167 37757 41434
45281 45282 53486 59371
Liquid: 834 41434 59567

TRICHLOROSILANE
Gas: 591 10832 20690 42249 42250
43004 43005 46803 46804 64383
64384
Liquid: 591 20690

1,1,1-TRICHLORO-2,2,2-TRIFLUOROETHANE
Liquid: 18269 70584 72341

TRIDECANE
Gas: 794 34172 51384
Liquid: 405 708 28472 40974 40975
43978 50824 51367 51384

1,1,1-TRIFLUOROETHANE
Gas: 375 1065 18269 47342
Liquid: 1065

TRIFLUOROIODOMETHANE
Gas: 7784 64391 64392
Liquid: 7784

TRIMETHYLAMINE
Gas: 4684 15325 18269 [illegible]
Liquid: 28387

1,2,4-TRIMETHYLBENZENE
Gas: 794 1278 5162 7269 7292
14916 34172
Liquid: 7292 14916 22724 45765 46894

2,2,3-TRIMETHYLBUTANE
Gas: 471 794 19088 34172 37738
Liquid: 471 19088 24529 45765

2,2,4-TRIMETHYLPENTANE
Gas: 794 1824 4840 19088 23064
28281 34172 46161
Liquid: 9330 19088 23664 44406 45765
46161

2,3,3-TRIMETHYLPENTANE
Gas: 794 19088 34172
Liquid: 45765

2,3,4-TRIMETHYLPENTANE
Gas: 794 1112 19088 28281 34172
65033
Liquid: 1112 19088 45765

2,4,4-TRIMETHYL-2-PENTENE
Liquid: 12076

U

UNDECANE

Gas:	794	24060	34172	51384	
Liquid:	405	708	834	11381	18269
	27767	38853	40974	40975	43978
	45765	50824	51367	51384	61498
	61499				

V

VINYL ACETATE

Gas:	51738
Liquid:	51738

W

WATER, DIDEUTERATED

Gas:	1237	14901	29718	30117	34720
	50406	67400	70167	73858	73859
Liquid:	1540	4035	9461	12673	13453
	13907	25739	27982	29047	29507
	29718	30117	31200	34527	39667
	45404	47389	50406	56165	58305
	64373	67400	70167	72097	72218
	73858	73859			

X

m-XYLENE

Gas:	794	2445	3863	6339	19088
	28281	34172			
Liquid:	526	834	2500	3863	18269
	19088	22724	24136	26417	43111
	45765	47389			

o-XYLENE

Gas:	794	2445	3863	6339	7269
	18269	19088	28281	34172	
Liquid:	834	2500	3863	18269	19088
	24136	34822	45765		

p-XYLENE

Gas:	794	2445	3863	6339	19088
	28281	34172	61690	65033	
Liquid:	526	1837	2500	3863	19088
	22724	24136	35625	36573	39164
	39165	43111	43272	47389	64303
	72374				

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STULL, DANIEL R MAYFIELD F DREW
IND ENG CHEM
35 639-45 1943 CA 37 4002
CORRECTION
35 1303-4 1943 CA 38 677

01029 BEHAVIOR OF SUPERCOOLED LIQUID AT LOW TEMPERATURES
KANDA EIZO OTSUBO AKIO HASEDA TAIICHIRO
SCIENCE REPTS RESEARCH INSTS TOHOKU UNIV
2 A 9-15 1950 CA 45 7401

01030 THE HEAT CAPACITY, HEATS OF FUSION AND VAPORIZATION, VAPOR PRESSURES, ENTROPY, AND THERPODYNAMIC FUNCTIONS OF METHYLHYDRAZINE.
ASTON J G FINK H L JANZ G J RUSSELL K E
J AM CHEM SOC
73 1939-43 1951 CA 45 7423

01046 VAPOR HEAT CAPACITIES DETERMINED BY THE USE OF VAPOR-PRESSURE EQUATIONS
BARROW GORDON M
J CHEM PHYS
21 1912-13 1953 CA 48 1751

01065 THE HEAT CAPACITY, HEATS OF TRANSITION, FUSION AND VAPORIZATION, VAPOR PRESSURE AND ENTROPY OF 1,1,1,-TRIFLUOROETHANE.
RUSSELL HORACE JR GOLDING D R V YOST DON M
J AM CHEM SOC
66 16-20 1944 CA 38 1168

01066 MOLECULAR HEAT OF CHLORINE DIOXIDE
MARTIN H STRAUSS W
MONATSH
85 1261-75 1954 CA 49 7357

01071 THE HEAT CAPACITY, HEAT OF TRANSITION, VAPORIZATION, VAPOR PRESSURE AND ENTROPY OF 1,1,1,-TRICHLOROETHANE.
RUBIN THOR R LEVEDAHL BLAINE H YOST DON M
J AM CHEM SOC
66 279-82 1944 CA 38 1422

01076 THE SPECIFIC HEATS OF GASEOUS 1,3-BUTADIENE, ISOBUTENE, STYRENE, AND ETHYLBENZENE.
SCOTT RUSSELL B MELLORS JANE W
J RESEARCH NATL BUR STANDARDS
34 243-54 1945 CA 39 2690

01112 THE THERMODYNAMICS OF BRANCHED-CHAIN PARAFFINS. THE HEAT CAPACITY, HEAT OF FUSION AND VAPORIZATION AND ENTROPY OF 2,3,4-TRIMETHYLPENTANE.
PITZER KENNETH S SCOTT DONALD W
J AM CHEM SOC
63 2419-22 1941 CA 35 7276

01119 THERMODYNAMIC PROPERTIES OF 1,3-BUTADIENE IN THE SOLID, LIQUID, AND VAPOR STATES.
SCOTT RUSSELL B MEYERS CYRIL H
RANDS ROBERT D JR BRICKWEDDE FERDINAND G
BEKKEDAHL NORMAN
J RESEARCH NATL BUR STANDARDS
35 39-65 1945 CA 39 4792

01172 SPECIFIC HEATS, SPECIFIC VOLUMES, TEMPERATURE CONDUCTIVITIES, AND THERMAL CONDUCTIVITIES OF SEVERAL DISUBSTITUTED BENZENES AND POLYCYCLIC SUBSTANCES.
UEBERREITER KURT ORTHMANN HANS JOACHIM
Z NATURFORSCH
5 A 101-8 1950 CA 44 6254

01183 THERMODYNAMIC PROPERTIES OF THE SYSTEM BENZENE-1,2-DICHLOROETHANE. II. THE EXCESS MOLAR HEAT CAPACITIES.
RUITER L H
REC TRAV CHIM
74 1467-81 1955 CA 50 6170

01187 THERMAL DATA ON ORGANIC COMPOUNDS. XXVI. SOME HEAT-CAPACITY, ENTROPY, AND FREE-ENERGY DATA FOR SEVEN COMPOUNDS CONTAINING OXYGEN.
PARKS GEO S KENNEDY WM D GATES ROBERT R
MOSLEY JOHN R MOORE GEO E RENQUIST MELVIN L
J AM CHEM SOC
78 56-9 1956 CA 50 5387

01200 THE HEAT CAPACITY OF LIQUIDS. III. THE HEAT CAPACITY OF HYDROCARBONS WITH SEVERAL UNCONDENSED NUCLEI.
KURBATOV V YA
J GEN CHEM USSR
20 1183-9 1950 CA 46 3385

01202 HYDROGEN PEROXIDE AND ITS ANALOGS. IV. SOME THERMAL PROPERTIES OF HYDROGEN PEROXIDE.
FOLEY WM T GIGUERE PAUL A
CAN J CHEM
29 895-903 1951 CA 46 3385

01220 THERMO DATA FOR PETROLEUM CHEMICALS. XX. KETENEACETONE EQUILIBRIUM.
KOBE KENNETH A HARRISON ROLAND H
PETROLEUM REFINER
33 8 109-10 1954 CA 48 12522

01231 THERMO DATA FOR PETROLEUM CHEMICALS. XXI. AMMONIA, HYDRAZINE, AND THE METHYLAMINES.
KOBE KENNETH A HARRISON ROLAND H
PETROLEUM REFINER
33 11 161-4 1954 CA 49 2172

01237 A STUDY OF THE ASSOCIATION STRUCTURE OF HEAVY WATER AND OF PROPANOL BY MEANS OF THERMAL MEASUREMENTS, ESPECIALLY OF SPECIFIC HEATS.
EUCKEN A EIGEN M
Z ELEKTROCHEM
55 343-54 1951 CA 46 2896

01254 EQUATION OF STATE AND THE THERMODYNAMIC PROPERTIES OF NEOPENTANE AND ISOBUTANE
KAZAVCHINSKII YA Z KATKHE G I
ZHUR FIZ KHIM
29 2230-5 1955 CA 50 13538

01255 IDEAL GAS THERMODYNAMIC FUNCTIONS OF THE ISOTOPIC HYDROGEN CYANIDES
BRADLEY JOE C HAAR LESTER FRIEDMAN ABRAHAM S
J RESEARCH NATL BUR STANDARDS
56 197-200 1956 CA 50 13539

01256 THERMODYNAMIC INVESTIGATION OF THE TRANSITIONS IN CARBON TETRABROMIDE AND AMMONIUM CHLORIDE
MARSHALL J G STAVELEY L A K HART K R
TRANS FARADAY SOC
52 19-31 1956 CA 50 13598

01261 THERMODYNAMIC FUNCTIONS FOR PHOSPHINE AND THE PHOSPHONIUM ION
ALTSHULLER AUBREY P
J AM CHEM SOC
77 4220-1 1955 CA 49 15430

01268 THERMODYNAMIC PROPERTIES OF LIQUID CHLORETHANE
GILBERT JAMES W LAGEMANN ROBERT T
J PHYS CHEM
60 804-5 1956 CA 50 14296

01278 ISOBARIC HEAT CAPACITIES AT BUBBLE POINT--TWO TRIMETHYLBENZENES AND HEPTANE.
HELFREY P F HEISER D A SAGE B H
IND ENG CHEM
47 2385-8 1955 CA 50 2267

01283 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. VI. ACETYLENES AND DIOLEFINS.
KOBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
28 10 133-6 1949 CA 44 1679

01288 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. XVII. SOME C3 OXYGENATED COMPOUNDS.
KOBE KENNETH A HARRISON ROLAND H
PENNINGTON ROBERT E
PETROLEUM REFINER
30 8 119-22 1951 CA 45 9841

01315 THE THERMODYNAMIC FUNCTIONS OF METHYL MERCAPTAN AND DIMETHYL SULFIDE
BINDER JOHN L
J CHEM PHYS
18 77-8 1950 CA 44 5692

01344 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. VIII. SULFUR COMPOUNDS.
KOBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
29 1 126-30 1950 CA 44 5083

01348 METHODS OF DETERMINATION OF HEAT CAPACITIES OF VAPORS OF ORGANIC SUBSTANCES
NASLOV P G
ZHUR PRIKLAD KHIM
30 736-44 1957 CA 51 15240
FOR ENGLISH TRANSLATION SEE TPRC NO. 18172

01353 THE HEAT CAPACITIES OF CERTAIN LIQUIDS
HARRISON D MOELWYN-HUGHES E A
PROC ROY SOC /LONDON/
239 A 230-46 1957 CA 51 15241

01360 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. X. THE CHLOROMETHANES.
KOBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
29 3 157-60 1950 CA 44 6608

01362 THE MOLAR HEAT OF THE DIBROMIDES OF DEUTERIOETHYLENE
WUYTS-ROBIETTE J JUNGERS J C
BULL SOC CHIM BELGES
58 80-6 1949 CA 44 5201

01369 THE MOLAR HEAT CAPACITIES OF LIQUID 1,2-DIBROMODEUTERIOETHANES AND TRIBROMODEUTERIOETHANES.
DHONT M JUNGERS J C
BULL SOC CHIM BELGES
58 196-204 1949 CA 44 5202

01370 THERMOCHEMISTRY FOR THE PETROCHEICAL INDUSTRY. IX. THE HALOGENS AND HALOGEN ACIDS.
KOBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
29 2 124-8 1950 CA 44 5570

01384 THE SPECIFIC HEAT OF ORGANIC VAPORS. I. METHOD OF MEASUREMENT AND PRELIMINARY RESULTS.
EUCKEN A SARSTEDT B
Z PHYSIK CHEM
50 B 143-70 1941 CA 37 2648

01477 HEAT CAPACITY OF LIQUIDS. III. HEAT CAPACITY OF HYDROCARBONS WITH SEVERAL NONCONDENSED RINGS.
KURBATOV V YA
ZHUR OBSHCHEI KHIM
20 1139-44 1950 CA 44 8757

01500 HEAT CAPACITIES OF SEVERAL ORGANIC LIQUIDS
HOUGH E W MASON D M SAGE B H
J AM CHEM SOC
72 5775-7 1950 CA 45 3232

01502 THE HEAT CAPACITY OF ORGANIC VAPORS. VII. A FLOW CALORIMETER REQUIRING ONLY 25 ML. OF LIQUID SAMPLE.
REYNOLDS ALLAN E DEVRIES THOMAS
J AM CHEM SOC
72 5443-5 1950 CA 45 3205

01507 MEASUREMENT OF GASEOUS HEAT CAPACITIES OF ORGANIC SUBSTANCES BY THE HOT-WIRE METHOD. I. HEAT CAPACITIES AND ACCOMMODATION COEFFICIENTS OF CARBON DIOXIDE, CARBON TETRACHLORIDE, CHLOROFORM, SILICON TETRACHLORIDE, METHYLENE DIBROMIDE, AND BROMOFORM.
AIHARA ARIYUKI
J CHEM SOC JAPAN
70 384-7 1949 CA 45 2733

01514 SOME OXYGENATED HYDROCARBONS C1 AND C2
KOBE KENNETH A PENNINGTON R E
PETROLEUM REFINER
29 9 135-8 1950 CA 45 430

01521 ROLE OF INTERACTION IN THE ETHANE-D6 MOLECULE
MASLOV P G
ZHUR FIZ KHIM
28 1507-20 1954 CA 49 13781

01522 ENTROPY, HEAT CAPACITY, AND HEATS OF TRANSITION OF 1,3,5-TRIMETHYLBENZENE.
TAYLOR R DEAN KILPATRICK JOHN E
J CHEM PHYS
23 1232-5 1955 CA 49 13754

01540 DIFFERENCE BETWEEN THE THERMAL AND CALORIC PROPERTIES OF HEAVY AND LIGHT WATER
EUCKEN A
NACHR AKAD WISS GOTTINGEN MATH-PHYSIK KLASSE BIOL -PHYSIOL-CHEM ABT
1 1-11 1949 CA 44 7641

01562 HEAT CAPACITIES OF LIQUIDS. I. HEAT CAPACITY OF BENZENE HYDROCARBONS.
KURBATOV V YA
J GEN CHEM /U S S R/
17 1999-2009 1947 CA 42 4829

01578 HEAT CAPACITY, ENTHALPY AND ENTROPY OF MODERN REFRIGERANTS IN THE GAS PHASE AT LOW PRESSURE. I. CH2CL2 AND CF2CL2.
JUSTI E LANGER F
Z TECH PHYSIK
21 189-94 1940 CA 35 3515

01604 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. XI. CYANOGEN COMPOUNDS.
KOBE KENNETH A LONG ERNEST G
PETROLEUM REFINER
29 5 89-92 1950 CA 44 8097

01606 THERMODYNAMIC FUNCTIONS OF HOCL AND CL2O
LUFT N W
J PHYS CHEM
58 928 1954 CA 49 1418

01697 HEAT CAPACITIES OF VAPORS
BRIGGS D K H
CHEMISTRY AND INDUSTRY
1328 1954 CA 49 3640

01699 HEAT-CAPACITY STANDARDS FOR THE RANGE 14 TO 1200 K.
GINNINGS DEFOE C FURUKAWA GEO T
J AM CHEM SOC
75 522-7 1953 CA 47 5237

01700 HEAT CAPACITY, HEAT OF FUSION, AND HEAT OF VAPORIZATION OF HYDROGEN FLUORIDE.
HU JIH-HENG WHITE DAVID JOHNSTON H L
J AM CHEM SOC
75 1232-6 1953 CA 47 5785

01702 THERMODYNAMIC CONSTANTS OF GASES AT HIGH TEMPERATURES
RIBAUD G
PUBL SCI ET TECH MINISTERE AIR /FRANCE/
266 1-169 1952 CA 47 6722

01714 COOLANTS FOR THE COMBUSTION MOTOR
WILKE W
AUTOMOBILTECH
56 21-4 1954 CA 48 7818

01769 GAS HEAT CAPACITY AND INTERNAL ROTATION IN 1,2-DICHLOROETHANE AND 1,2-DIBROMOETHANE.
GWINN WM D PITZER KENNETH S
J CHEM PHYS
16 303-9 1948 CA 42 4010

01777 THE ENTROPY OF ETHYL CHLORIDE. HEAT CAPACITY FROM 13 TO 287 K. VAPOR PRESSURE. HEATS OF FUSION AND VAPORIZATION.
GORDON JOSEPH GIAUQUE W F
J AM CHEM SOC
70 1506-10 1948 CA 42 4441

01781 MEASUREMENTS OF HEAT OF VAPORIZATION AND HEAT CAPACITY OF A NUMBER OF HYDROCARBONS
OSBORNE NATHAN S GINNINGS DEFOE C
J RESEARCH NATL BUR STANDARDS
39 453-77 1947 CA 42 1795

01783 HEAT OF MIXING OF ACETIC ACID WITH PYRIDINE AND QUINOLINE
PUSHIN N A FEDJUSHKIN A V KRGOVIC B
BULL SOC CHIM BELGRADE
11 1 12-24 1947 CA 42 2168

01790 THE MEASUREMENT OF THE SPECIFIC HEATS OF SOME ORGANIC LIQUIDS USING THE COOLING METHOD
LEECH J W
PROC PHYS SOC /LONDON/
62 B 390-8 1949 CA 44 1320

01797 ETHANETHIOL /ETHYL MERCAPTAN/. THERMODYNAMIC PROPERTIES IN THE SOLID, LIQUID, AND VAPOR STATES. THERMODYNAMIC FUNCTIONS TO 1000 K.
MCCULLOUGH J P SCOTT D W FINKE H L GROSS M E
WILLIAMSON K D PENNINGTON R E WADDINGTON GUY
HUFFMAN H M
J AM CHEM SOC
74 2801-4 1952 CA 46 9405

01799 THERMODYNAMIC PROPERTIES OF CHLORINE TRIFLUORIDE
SCHEER MILTON D
J CHEM PHYS
20 924 1952 CA 46 9952

01806 ROTATIONAL HINDRANCE IN ETHER AND ALCOHOL MOLECULES ON THE BASIS OF HEAT-CAPACITY DETERMINATIONS
EUCKEN A FRANCK E U
Z ELEKTROCHEM
52 195-204 1948 CA 44 394

01839 THERMAL DATA, VAPOR PRESSURE, AND ENTROPY OF CHLORINE TRIFLUORIDE.
GRISARD J W BERNHARDT H A OLIVER GEORGE D
J AM CHEM SOC
73 5725-7 1951 CA 46 2388

01815 EXPERIMENTAL VAPOR HEAT CAPACITIES AND HEATS OF VAPORIZATION OF HEXANE AND 2,2-DIMETHYLBUTANE.
WADDINGTON GUY DOUSLIN DONALD R
J AM CHEM SOC
69 2275-9 1947 CA 42 812

01816 THE THERMODYNAMIC PROPERTIES AND MOLECULAR STRUCTURE OF CYCLOHEXANE, METHYLCYCLOHEXANE, ETHYLCYCLOHEXANE, AND THE SEVEN DIMETHYLCYCLOHEXANES.
BECKETT CHARLES W PITZER KENNETH S
SPITZER RALPH
J AM CHEM SOC
69 2488-95 1947 CA 42 813

01824 ISOBARIC HEAT CAPACITIES AT BUBBLE POINT. PROPENE, NEOHEXANE, CYCLOHEXANE, AND ISOOCTANE.
AUERBACH C E SAGE B H LACEY W N
IND ENG CHEM
42 110-13 1950 CA 44 2838

01825 THERMODYNAMIC PROPERTIES OF THREE ISOMERIC PENTENES
SCOTT D W WADDINGTON GUY SMITH J C
HUFFMAN H M
J AM CHEM SOC
71 2767-73 1949 CA 44 2838

01831 THERMODYNAMICS OF MIXED PHASES. IX. THE VAPORIZATION EQUILIBRIUM OF BENZENE AND 1,2-DICHLOROETHANE.
SIEG L CRUTZEN J L JOST W
Z PHYSIK CHEM
198 263-9 1951 CA 46 4870

01833 ISOTHERMS AND THERMODYNAMIC FUNCTIONS OF METHYL FLUORIDE AT TEMPERATURES BETWEEN 0 DEGREES AND 150 DEGREES AND AT PRESSURES UP TO 150 ATMOSPHERES
MICHELS A VISSER A LUNBECK R J WOLKERS G J
PHYSICA
18 114-20 1952 CA 46 4870

01837 THE ENTHALPY, ENTROPY, AND SPECIFIC HEAT OF LIQUID P-XYLENE FROM 3 TO 330 DEGREES. THE HEAT OF FUSION.
CORRUCCINI R J GINNINGS D C
J AM CHEM SOC
69 2291-4 1947 CA 42 1112

01852 THERMODYNAMIC FUNCTIONS OF ETHYLENE OXIDE
GODNEV I MOROZOV V
ZHUR FIZ KHIM
22 801-3 1948 CA 42 8603

01874 THERMODYNAMIC PROPERTIES OF CIS-2-BUTENE FROM 15 DEGREES TO 1500 K
SCOTT RUSSELL B FERGUSON W JULIAN
BRICKWEDDE FERDINAND G
J RESEARCH NATL BUR STANDARDS
33 1-20 1944 CA 38 5723

01894 TRANS-2-BUTENE. THE HEAT CAPACITY, HEATS OF FUSION AND VAPORIZATION, AND VAPOR PRESSURE. THE ENTROPY AND BARRIER TO INTERNAL ROTATION.
GUTTMAN LESTER PITZER KENNETH S
J AM CHEM SOC
67 324-7 1945 CA 39 1352

01906 NOTE ON THE SPECIFIC HEAT OF SULFUR HEXAFLUORIDE
MEYER E GERALD BUELL C E
J CHEM PHYS
16 744 1948 CA 42 6635

02002 ISOBARIC HEAT CAPACITY OF 1-BUTENE AND 1-PENTENE AT BUBBLE POINT
SCHLINGER W G SAGE B H
IND ENG CHEM
41 1779-82 1949 CA 44 4322

02007 ETHANETHIOL AND 2-THIAPROPANE. HEATS OF FORMATION AND ISOMERIZATION, THE CHEMICAL THERMODYNAMIC PROPERTIES FROM 0 TO 1000 K.
MCCULLOUGH J P HUBBARD W N FROW F R
HOSSENLOPP I A WADDINGTON GUY
J AM CHEM SOC
79 561-6 1957 CA 51 8527

02016 SPECIFIC HEATS OF COMPOUNDS IN LIQUID AND IN SOLID STATE NEAR THE MELTING, HEAT OF FUSION AND HEAT OF ASSOCIATION.
PROPOPIU STEFAN
COMPT REND
226 1001-2 1948 CA 42 6223

02024 CALORIMETRIC PROPERTIES OF BENZOIC ACID FROM 0 DEGREE TO 410 K
FURUKAWA GEORGE T MCCOSKEY ROBERT E
KING GERARD J
J RESEARCH NATL BUR STANDARDS
47 256-61 1951 CA 46 4348

02445 EMPIRICAL HEAT-CAPACITY EQUATIONS OF VARIOUS GASES
SPENCER HUGH M
J AM CHEM SOC
67 1859-60 1945 CA 40 783

02500 SPECIFIC HEAT OF HYDROCARBONS
VVEDENSKII A A
NEFTYANOE KHOZ
25 2 47-50 1947 CA 41 6126

02542 THE HEAT CAPACITY OF GASEOUS PARAFFIN HYDROCARBONS, INCLUDING EXPERIMENTAL VALUES FOR PENTANE AND 2,2-DIMETHYLBUTANE.
PITZER KENNETH S
J AM CHEM SOC
63 2413-18 1941 CA 35 7692

02563 THE HEAT CAPACITY AND ENTROPY, HEATS OF FUSION AND VAPORIZATION AND THE VAPOR PRESSURE OF DIMETHYL ETHER. THE DENSITY OF GASEOUS DIMETHYL ETHER.
KENNEDY R M SAGENKAHN MALCOLM ASTON J G
J AM CHEM SOC
63 2267-72 1941 CA 35 7278

02676 THE HEAT CAPACITY AND ENTROPY, HEATS OF FUSION AND VAPORIZATION, AND THE VAPOR PRESSURE OF 1-BUTENE. THE ZERO-POINT ENTROPY OF THE GLASS. THE ENTROPY OF THE GAS FROM MOLECULAR DATA.
ASTON J G FINK H L BESTUL A B PACE E L
SZASZ G J
J AM CHEM SOC
68 52-7 1946 CA 40 1385

02737 THERMODYNAMIC PROPERTIES OF THE TITANIUM CHLORIDES
ALTMAN DAVID FARBER MILTON MASON DAVID M
J CHEM PHYS
25 531-6 1956 CA 51 836

02761 SOME THERMODYNAMICAL PROPERTIES OF GASEOUS SULFUR DICHLORIDE
MCDOWELL C A MOELWYN-HUGHES E A
PROC ROY SOC /LONDON/
187 A 398-402 1946 CA 41 1513

02916 HEATS, EQUILIBRIUM CONSTANTS, AND FREE ENERGIES OF FORMATION OF THE MONOOLEFIN HYDROCARBONS.
KILPATRICK JOHN E PROSEN EDWARD J
PITZER KENNETH S ROSSINI FREDERICK D
J RESEARCH NATL BUR STANDARDS
36 559-612 1946 CA 40 6330

03002 HEAT CAPACITY OF SOME PURE LIQUIDS AND AZEOTROPIC MIXTURES. II.
ZHDANOV A K
J GEN CHEM /U S S R/
15 895-902 1945 CA 40 6328

03083 THERMODYNAMIC PROPERTIES OF METHYL CYANIDE AND METHYL ISOCYANIDE
EWELL RAYMOND H BOURLAND JAMES F
J CHEM PHYS
8 635-6 1940 CA 34 6499

03281 THE HEAT CAPACITY OF CYANOGEN GAS
BURCIK E J YOST DON M
J CHEM PHYS
7 1114-15 1939 CA 34 1217

03409 THERMODYNAMIC CONSTANTS OF SILICON TETRAFLUORIDE. THE HYDROLYSIS EQUILIBRIUM OF SILICON TETRAFLUORIDE.
RYSS I G
J PHYS CHEM /U S S R/
14 571-81 1940 CA 35 2057

03533 STATISTICAL THERMODYNAMICS OF SEVERAL HALOMETHANES
EDGELL WALTER F GLOCKLER GEORGE
J CHEM PHYS
9 484-5 1941 CA 35 4646

03771 SPECTRUM PHYSICS AND THERMODYNAMICS. THE CALCULATION OF FREE ENERGIES, ENTROPIES, SPECIFIC HEATS AND EQUILIBRIA FROM SPECTROSCOPIC DATA AND THE VALIDITY OF THE THIRD LAW. VS. PROGRESS IN THE PERIOD 1935-40.
ZEISE H
Z ELEKTROCHEM
48 425-47 1942 CA 37 4621
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03797 SUBSTITUTED METHANES. VII. VIBRATIONAL SPECTRA, FORCE CONSTANTS, AND CALCULATED THERMODYNAMIC PROPERTIES FOR METHYL IODIDE AND METHYL-D3 IODIDE.
FENLON PAUL F CLEVELAND FORREST F
MEISTER ARNOLD G
J CHEM PHYS
19 1561-5 1951 CA 46 5968

03863 THERMOCHEMISTRY FOR THE PETROCHEMICAL INDUSTRY. XIV. SOME MISCELLANEOUS HYDROCARBONS.
KOBE KENNETH A PENNINGTON R E
PETROLEUM REFINER
29 12 93-6 1950 CA 45 1863

03901 AN IMPROVED FLOW CALORIMETER. EXPERIMENTAL VAPOR HEAT CAPACITIES AND HEATS OF VAPORIZATION OF HEPTANE AND 2,2,3-TRIMETHYLBUTANE.
#ADDINGTON GUY TODD SAMUEL S HUFFMAN HUGH M
J AM CHEM SOC
69 22-30 1947 CA 41 2314
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WADDINGTON, G. TODD, S. S. HUFFMAN, H. M.
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03933 ASSIGNMENT OF TORSIONAL FREQUENCIES IN SOME HALOGENATED ETHANES
LUFT NORBERT W
J CHEM PHYS
22 155-6 1954 CA 48 4955

03973 IDEAL GAS THERMODYNAMIC FUNCTIONS OF THE ISOTOPIC HYDROGEN SULFIDES
HAAR LESTER BRADLEY JOE C FRIEDMAN ABRAHAM S
J RESEARCH NATL BUR STANDARDS
55 285-90 1955 CA 50 12627

03979 THERMODYNAMIC FUNCTIONS OF METHANETHIOL AND METHYL SULFIDE
BINDER JOHN L
J CHEM PHYS
17 499-500 1949 CA 43 7804

03985 THE HEAT CAPACITY OF ORGANIC VAPORS. V. ACETALDEHYDE.
COLEMAN CHARLES F DE VRIES THOMAS
J AM CHEM SOC
71 2839-41 1949 CA 43 7804

04016 THERMODYNAMIC PROPERTIES OF DIIODOACETYLENE AND SOME SYMMETRICAL-TOP ACETYLENES
ZIOMEK JOSEPH S CLEVELAND FORREST F
J CHEM PHYS
17 578-81 1949 CA 43 8838

04035 ADIABATIC PIEZOOPTIC COEFFICIENT OF HEAVY WATER
NARAYANASWAMY C K NARAYANAN P S KRISHNAN R S
NATURE
180 497-8 1957 CA 52 822

04037 SUBSTITUTED METHANES. X. INFRARED SPECTRAL DATA, ASSIGNMENTS, POTENTIAL CONSTANTS, AND CALCULATED THERMODYNAMIC PROPERTIES FOR CF3BR AND CF3I.
MCGEE PAUL R CLEVELAND FORREST F
MEISTER ARNOLD G DECKER CHARLOTTE E
J CHEM PHYS
21 242-6 1953 CA 47 4198

04081 SUBSTITUTED ETHANES. III. RAMAN AND INFRARED SPECTRA, ASSIGNMENTS, FORCE CONSTANTS, AND CALCULATED THERMODYNAMIC PROPERTIES FOR 1,1,1-TRICHLOROETHANE.
ELSABBAN M ZAKI MEISTER ARNOLD G
CLEVELAND FORREST F
J CHEM PHYS
19 855-64 1951 CA 46 341

04301 SOME HEAT-CAPACITY DATA FOR ISOPROPYL ALCOHOL VAPOR
PARKS GEO S SHOMATE C HOWARD
J CHEM PHYS
8 429 1940 CA 34 4652

04306 SPECIFIC HEAT OF ETHYL ETHER, NITROBENZENE AND CARBON DISULFIDE.
MAZUR JOSEF
Z PHYSIK
113 710-20 1939 CA 34 1545

04453 PYRIDINE. EXPERIMENTAL AND CALCULATED CHEMICAL THERMODYNAMIC PROPERTIES BETWEEN 3 AND 1500 K., A REVISED VIBRATIONAL ASSIGNMENT.
MCCULLOUGH J P DOUSLIN D R MESSERLY J F
HOSSELOPP I A KINCHELOE T C WADDINGTON GUY
J AM CHEM SOC
79 4289-95 1957 CA 51 17367

04525 HEATS, EQUILIBRIUM CONSTANTS, AND FREE ENERGIES OF FORMATION OF THE ACETYLENE HYDROCARBONS THROUGH THE PENTYNES, TO 1500 K.
WAGMAN DONALD D KILPATRICK JOHN E
PITZER KENNETH S ROSSINI FREDERICK D
J RESEARCH NATL BUR STANDARDS
35 467-96 1946 CA 40 3676

04640 THE HEAT CAPACITIES OF SOME ORGANIC COMPOUNDS CONTAINING NITROGEN AND THE ATOMIC HEAT OF NITROGEN. I.
SATO SYUN-ITI SOGABE TATUYOSI
SCI PAPERS INST PHYS CHEM RESEARCH /TOKYO/
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04671 THE HEAT CAPACITIES OF SOME PURE LIQUIDS AND AZEOTROPIC MIXTURES
ZHDANOV A K
J GEN CHEM /U.S.S.R./
11 7 471-82 1941 CA 35 7275

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HALVERSON FREDERICK STAMM ROBERT F
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